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R. W. KELLEY

County Borough of Reading

ANNUAL REPORT

OF THE

School Medical Officer

FOR THE YEAR

1956

By

E. HUGHES, M.D., D.P.H.

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COUNTY BOROUGH OF READING

ANNUAL REPORT

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1956

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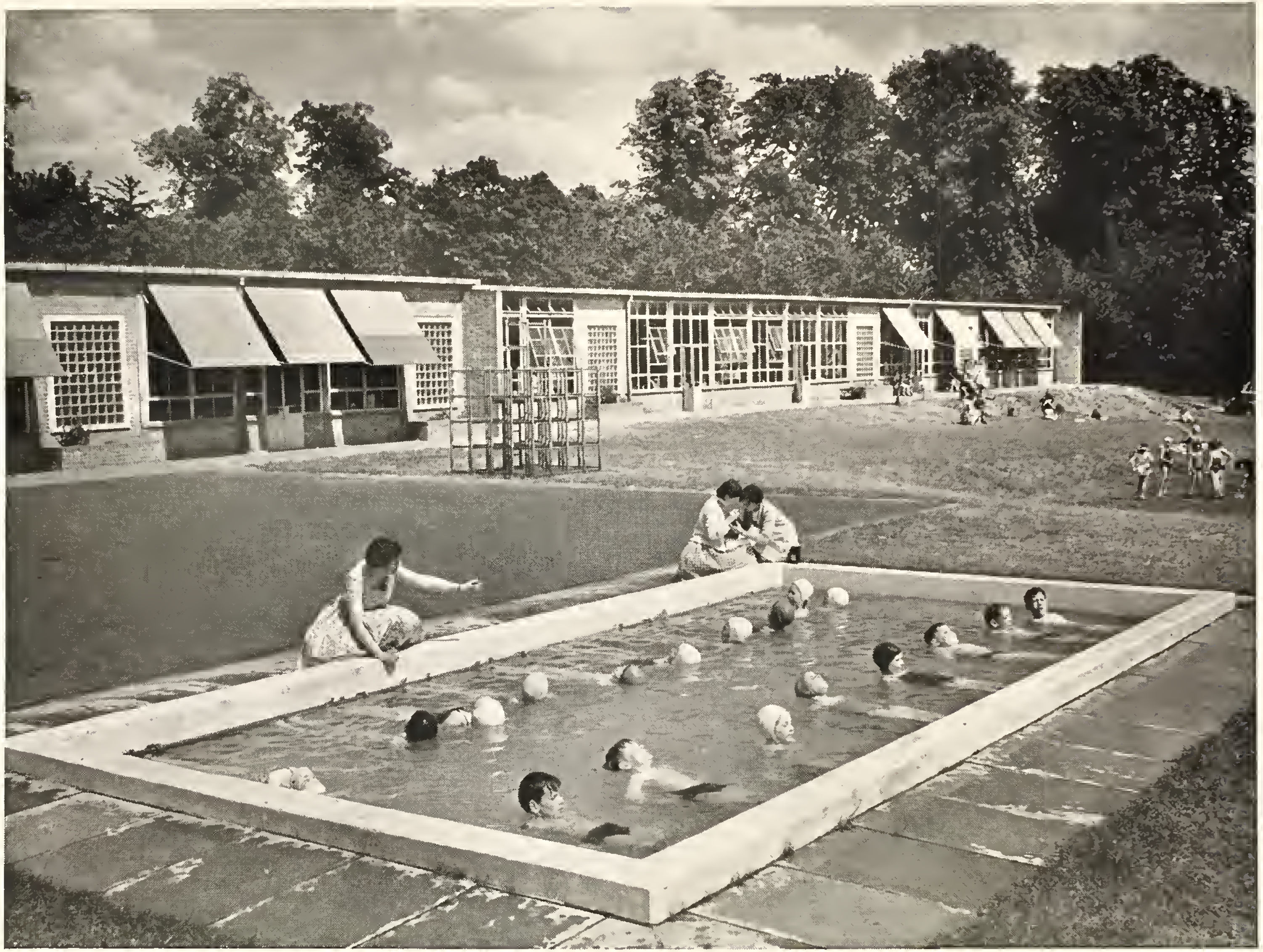

THE HILL PRIMARY SCHOOL LEARNER POOL

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(as at 31st December, 1956)

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Principal School Medical Officer :

E. HUGHES, M.D., D.P.H.

Deputy Principal School Medical Officer :

G. M. O'DONNELL, B.A., M.B., D.P.H.

School Medical Officers :

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ETHEL AMY FISHER, M.B., B.Ch., D.R.C.O.G.
ELIZABETH M. SEFTON, M.R.C.S., L.R.C.P., D.C.H., L.M., D.P.H.
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J. CAMPBELL, L.D.S., R.C.S. (Ed.)

Dental Officer :

(Mrs.) M. V. GODDARD, L.D.S., R.C.S.

Speech Therapists :

ANN C. RANDLE, L.C.S.T.
JULIA MONTEATH, L.C.S.T.

School Nurses :

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Mrs. H. KING
Miss M. PLATT
Mrs. J. YELLAND (commenced 1st October, 1956)
*Mrs. A. ALLISON
*Miss R. BROMLEY
*Miss F. CLARK
*Miss B. BRUNDLE
*Miss P. HART
*Miss O. JARVIS
*Mrs. L. KINGSLEY
Mrs. M. LAW (commenced 17th September, 1956)
*Miss H. MORTIMER
*Miss R. UPTON
*Miss M. WILLIAMSON

* Combined Health Visiting and School Nursing Duties

Oral Hygienist :

Miss V. ANDERSON

Clinic Assistants :

Mrs. D. BOXALL
Miss B. J. McMANUS
Mrs. R. NEALE

Senior Clerk :

Miss W. M. DIX

READING SCHOOL HEALTH SERVICE

To the Chairman and Members of the Education Committee

Ladies and Gentlemen,

I have the honour to present my report on the School Health Service for the year ending 31st December, 1956. Detailed comments on the many aspects of our work are included in the body of the report and therefore I will not refer to them in this introduction. At the same time I think that all who read this report will form some appreciation of the amount of interesting work which is being done by the School Health Service in Reading. This includes a variety of subjects and will, I hope, negative any suggestion that a School Medical Officer's life lacks variety. I think it is true to say that the work we are doing in connection with partially deaf children is attracting quite a lot of attention and although I am not so bold as to say that there is a complete change in this work, I think we are pointing to new directions in which this work can develop.

I would like to express my appreciation of the continued help which has been given to me by the Chief Education Officer, his office staff and the Reading teachers during the year. I must also thank the Chairman and members of the Welfare Sub-Committee of the Education Committee for the interest and support they have given to the Department throughout the year. Lastly, but by no means least, I must again pay tribute to the loyalty and hard work of my own staff during this period and particularly to Dr. G. M. O'Donnell who has supervised the compilation of this report.

I am,

Your obedient Servant,

E. HUGHES,

Principal School Medical Officer.

ESTIMATE OF THE NUMBERS OF CHILDREN BETWEEN THE AGES OF 5 AND 15 YEARS IN EACH OF THE NEXT FIVE YEARS

	Between 14 & 15	13 & 14	12 & 13	11 & 12	10 & 11	9 & 10	8 & 9	7 & 8	6 & 7	5 & 6	Total	Increase	Decrease	Cumulative incr. or decr.
31st Aug., 1956	1,414	1,597	1,730	1,691	1,759	2,109	1,898	1,755	1,686	1,661	17,300	—	—	—
31st Aug., 1957	1,597	1,730	1,691	1,759	2,109	1,898	1,755	1,686	1,661	1,606	17,492	192	—	+192
31st Aug., 1958	1,730	1,691	1,759	2,109	1,898	1,755	1,686	1,661	1,606	1,575	17,470	—	22	+170
31st Aug., 1959	1,691	1,759	2,109	1,898	1,755	1,686	1,661	1,606	1,575	1,545	17,285	—	185	— 15
31st Aug., 1960	1,759	2,109	1,898	1,755	1,686	1,661	1,606	1,575	1,545	1,505	17,099	—	186	—201
31st Aug., 1961	2,109	1,898	1,755	1,686	1,661	1,606	1,575	1,545	1,505	1,593	16,933	—	166	—367

SCHOOL CLINICS

QUEEN'S ROAD CLINIC—

Minor Ailments	Daily, 9 a.m.-10 a.m.
Ultra Violet Light Therapy	Monday, 2 p.m., Friday, 10 a.m.
Ringworm Clinic	Wednesday, 2 p.m.
Remedial Exercises	Tuesday, 2.30 p.m.

WHITLEY CLINIC—

Minor Ailments	Daily, 9 a.m.-10 a.m.
Ultra Violet Light Therapy	Monday and Wednesday, 11.30-12 noon.

SOUTHCOTE PRIMARY SCHOOL CLINIC—

Minor Ailments	Tuesday and Thursday, 9.30-10 a.m.

BATTLE SCHOOL CLINIC—

Minor Ailments	Daily, 9 a.m.-10 a.m.

GROVELANDS SCHOOL CLINIC—

Minor Ailments	Daily, 9 a.m.-10 a.m.

CAVERSHAM CLINIC—

Minor Ailments	Monday, Tuesday, Thursday, 9 a.m.-10 a.m.

HILL SCHOOL CLINIC—

Minor Ailments	Wednesday, 9 a.m.-10 a.m.

EMMER GREEN SCHOOL CLINIC—

Minor Ailments	Friday, 9 a.m.-10 a.m.

GEOFFREY FIELD SCHOOL CLINIC—

Minor Ailments	Wednesday, 9 a.m.-10 a.m.

ST. MICHAEL'S SCHOOL CLINIC—

Minor Ailments	Wednesday, 9.30 a.m.-10 a.m.

ASHMEAD SCHOOL CLINIC—

Minor Ailments	Friday, 2 p.m.-3 p.m.

STONEHAM SCHOOL CLINIC—

Minor Ailments	Tuesday, 9 a.m.-10 a.m.

DENTAL CLINICS—

Queen's Road Clinic
Whitley Clinic

SPEECH THERAPY CLINICS—

Ashmead School	1 Session	Grovelands School	1 Session
The Avenue School	2 ,,	The Hill School	1 ,,
Battle Hospital	2 ,,	Queen's Road Clinic	7 ,,
Emmer Green School	1 ,,	St. Michael's School	1 ,,
Geoffrey Field School	1 ,,	Southcote School	1 ,,
George Palmer Deaf Unit	2 ,,	Whitley Clinic	2 ,,

NUTRITION

The following table relates the numbers of children showing evidence of poor nutrition, diagnosed at periodic medical inspections, over the past five years :—

1 Year	2 Pupils medically inspected	3 Poor Nutritional Standards	
		No.	% of Col. (2)
1952	4,634	25	0·5
1953	4,827	39	0·8
1954	4,754	35	0·7
1955	5,530	20	0·3
1956	5,124	25	0·4

It is quite evident that the nutritional standards of Reading school children are of a consistently high order and the recognition of a true case of undernourishment both infrequent and arresting. This pleasing situation is undoubtedly the reflection of a decade of improving social and economic conditions wherein parents have found greater opportunity to enjoy and indulge their offspring.

However, as the choice of food is no longer rigorously conditioned by financial stringency or the occasions of war, the necessity for a more widespread knowledge of nutritional values and food patterns is apparent. It is difficult to believe that food itself could possess any inherent dangers yet when one considers the high mortality in middle life, where heart disease takes increasing toll of those who eat too much, the importance of ensuring correct food habits in the young is undeniable. General overeating and dietary abnormalities in the diet are patterns which are mostly established in adolescence and their tenacity cannot be overcome by the more complaisant mind of middle age. Unfortunately a policy of moderation in diet is always difficult to evaluate as each individual has differing needs. Even so a wider understanding that a replete child should not be cajoled into further eating and that meals should not be overburdened with any one component may well ensure enjoyment of youth and a prospect of age.

School Meals Service. The following report has been received from Miss P. E. Hall, the School Meals Organiser :—

During the year the percentage of children eating dinners at maintained schools increased slightly to 42.7%. A total of 8,600 dinners have been served daily, which is an increase of 300 meals per day compared with last year, in spite of the cost of the meal being increased from 9d. to 10d. in September, 1956.

With no additional kitchens opened this year, it has meant that all kitchens are rather overcrowded and are serving more meals than was planned originally for each kitchen. Space is particularly short at the West end of Reading.

An experiment has been made in providing a choice of the main dish at one or two secondary schools. For example, there would be a choice of corned beef or pilchards, curry or beef stew, roast mutton or minced beef. When providing a choice various difficulties do arise, such as planning a properly balanced meal, giving sufficient variety and making certain that all children get a choice in turn. On the whole, I consider that it is worth while to provide a choice occasionally for senior children.

During the spring there was a shortage of old potatoes which led to a very high price being charged. During this period the children were given approximately half their normal allowance of potatoes and bread was served instead. This proved quite popular when served with a small portion of potato, but not if served without any potato.

Two Conferences were arranged for staff, one for all members of the Service on the new Hygiene Regulations, and the other on Time and Motion Study in the Kitchen. This was an entirely new subject for the Supervisors, who were interested in it, and have asked for more lectures on the same subject. A Committee of Supervisors has been formed to help plan future Conferences and put forward any aspects the Supervisors would like included. At the first one planned by the Committee there is to be an exchange of popular recipes, in addition to lectures and the showing of film strips.

There is a real shortage of trained women coming into the School Meals Service as kitchen supervisors. In order to try and overcome this difficulty the Committee has agreed to members of the School Meals Service being released during one afternoon a week when they can attend the Technical College during the afternoon and evening to study for the City and Guilds of London Institute 150 Certificate. At present 13 women are attending classes at the College. I think that this is very creditable as most of them are married women and have homes to run in addition to their jobs in the School Meals Service.

The Hygiene Regulations have brought all hygiene matters very much to the fore. Two new sculleries are to be built in order to provide better conditions for serving the carried meals at two schools. All the staff were very hygiene conscious after having seen the films and the germ cultures at the Conference on the Hygiene Regulations. I feel that a new high level of appreciation has now been reached in the matter of food temperatures after H.M. Inspector visited one kitchen. The Inspector took the temperature of the mashed potatoes before they left the kitchen in containers for an outside school. The temperature was rather low, although everything possible had been done to prevent loss of heat. It was decided that the kitchen was draughty and that this was the cause. The next day one woman asked another, who was dishing up potatoes, to stop and do something else for a minute or two, but she firmly said "I certainly cannot stop now, I am dishing up potatoes and they will lose too much heat if I stop ! "

It is a real joy when visiting schools to find that practically no waste is coming back on the children's plates. This is almost entirely due to the help and attitude of the teachers. I am glad to be able to say that this is the case in the majority of schools and that I should like to thank the teachers for their persistence and all the work they do to produce such good results.

School Milk—

No. of pupils attending maintained schools ...	17,160
No. of pupils taking milk	13,914
Percentage of pupils taking milk	81.8%

(*Note* :—October, 1955—82% ; October, 1954—81%)

Daily supply of milk approximately 580 gallons.

HANDICAPPED CHILDREN

The ascertainment and subsequent placing of the handicapped child is probably the most interesting and the most rewarding of the many tasks facing a School Medical Service. Throughout the years a satisfactory solution for each case has been attempted by the doctors and teachers concerned whilst on varying occasions public interest, social conditions, or individual enthusiasm have brought a greater awareness and emphasis to the relief of individual groups within the handicapped classifi-

HANDICAPPED PUPILS—SUMMARY OF POSITION AT 31st DECEMBER, 1956

Type of Handicap		Number on Register, 31st Dec., 1956		Receiving appropriate education		(*a*) Number in Residential Schools (*b*) Number attending Day Schools			Not in receipt of appropriate education, but on waiting list for such			Remarks
		M.	F.	M.	F.		M.	F.		M.	F.	
(*a*)	Blind	1	1	1	1	(*a*)	1	1		—	—	
(*b*)	Partially Sighted	2	3	2	3	(*a*)	2	3		—	—	
(*c*)	Deaf	7	3	7	3	(*a*)	7	3		—	—	
(*d*)	Partially Deaf	38	19	38	19	(*a*) (*b*)	2 36	3 16		— —	— —	(*b*) Special class at George Palmer School— 5 M. 5 F.
(*e*)	Educationally Subnormal	87	40	54	29	(*a*) (*b*)	2 52	3 26	(*a*) (*b*)	2 31	— 11	
(*f*)	Epileptic	20	15	20	15	(*a*) (*b*)	2 18	— 15		— —	— —	7 M. 2 F. attend Avenue Sch. 1F. taught at home+ children in ordinary schools
(*g*)	Maladjusted	22	11	18	8	(*a*) (*b*)	10 8	2 6	(*a*) (*b*)	1 3	1 2	(*b*) Child Guidance Hostels
(*h*)	Physically Handicapped ...	30	17	30	17	(*a*) (*b*)	1 29	1 16		— —	— —	(*b*) 2 M. 3 F. in spastics group
(*i*)	Delicate Children ...	27	12	27	12	(*a*) (*b*)	2 25	1 11		— —	— —	1 M. 2 F. in hospital 4 M. 2 F. taught at home
(*j*)	Speech Defects	150	56	149	56	(*b*)	150	56	(*a*)	1	—	

cation. Although there may be occasional exceptions it is, in general, true to say today that any Reading child with an accounted handicap can be provided with suitable educational facilities appropriate to his condition and that this special education will be of a form sufficient to convince the School Medical Officer concerned that the child's best interests are being served.

Although this is largely true there is one category of handicapped children which still presents a major problem inconsistent of solution. I refer to the maladjusted child whose battles have been fought over vast acreages of paper more to the satisfaction of those who have made this problem their particular concern than to the unfortunate children themselves. For the maladjusted child is indeed unfortunate as the emotional stresses which contribute to his condition are, in the most intransigent cases, almost impossible of solution. For it is the bastion of the home and the intimacy of family life which to all other children, offer a support and a retreat, that have in this case turned traitor, providing both the origin and the exacerbation of the child's illness. The rejection of a child by one or both parents, the eclipse of affection, and the reduction of family life to a plane of coldness or impersonality, creates a barrier against which the young child will struggle in vain but against which he must continue to struggle. Small wonder that his tragic attempts so easily repulsed are undermined by aberrations in personality and behaviour. Each fresh repulse brings further retreat into the undeveloped couloirs of the child's mind reflected by an increase in the intensity of the outward manifestations. It may be possible to ameliorate a condition of this nature, to set up a satisfactory mother image, to create in other surroundings something that has the feeling of home, but at the very best it is a substitute and unfortunately the child will recognise it always as a substitute. It may be argued in an instance of this type that those most in need of treatment are the parents concerned. But who, in our present state of knowledge, can restore to a barren nature the fullness of maternal or paternal love ?

Fortunately the second group of maladjusted cases are more easy of solution provided that some degree of parental co-operation is obtained. This is the group where maladjustment arises from a rejection not of the child but of one parent by the other. The emotional cross-currents, the attempts to recruit a child's sympathies on one side or the other, the constant naggings and suspicions that bedevil a marriage that has turned to dislike and antipathy, all leave their mark on the child. He is the natural target upon whom every unpleasantness or disharmony takes effect. In later years the parents may well cease their recriminations in an effort to amend the damage they have done. Unfortunately, in most cases it is only when the condition of the child becomes so extreme that even marital warfare must take second place, that the combatants will turn to the salvage of their beloved victim.

Of course many cases of maladjustment are related to school problems and result from educational difficulties or incompatability with teacher or fellow pupils. These may cause a similar intensity of unhappiness and confusion but in these instances the child has always a reserve in the strength and affection of its parents, from which renewed purpose and determination may be drawn.

(*a*) *Blind.*—One boys attends Condover Hall, Shrewsbury, and a girl is resident at Sunshine House Nursery School, Leamington Spa. One other girl is awaiting assessment prior to admission to a Residential School.

(*b*) *Partially Sighted.*—Three girls are resident at Barclay School, Sunninghill, and 2 boys at Blatchington Court, Seaford.

(*c*) *Deaf.*—There are 7 boys and 3 girls on the Deaf Register and all are receiving residential school treatment. Two boys and 2 girls attend the Royal School for Deaf and Dumb Children, Margate. Two boys attend St. Thomas's School, Basingstoke, and

3 others are at Donnington Lodge, Newbury, There is also 1 girl at St. John School, Boston Spa.

(*d*) *Partially Deaf.* In Reading during the autumn term there were 71 children known to have defective hearing. Their distribution and treatment were as follows :—

At residential schools for the deaf	10
At residential schools for the partially deaf	5
At the Unit for partially deaf children	10
In normal schools in the Borough	42
Children with deafness as one of a dual defect :—	
In a special school for the E.S.N.	3
In a normal school	1
	71

Accounts of work with two of the above groups are reported below. They deal with the progress of the class of partially deaf children and the results of a survey of children with defective hearing in normal schools. In the course of this survey speech audiometry was used. As it is a relatively new test of hearing, a brief description is included as a separate item

Special Class for Partially Deaf Children

This unit, which was described in last year's report, is situated in the George Palmer Junior School. It is a classroom modified by sound insulated walls, ceiling and floor and especially equipped with a Westrex group hearing aid. The unit caters for up to ten children ranging from 6-11 years of age. It has been found that with extraneous duties devolving on the teacher in charge and the wide age and ability range of the pupils, only eight children can be given the requisite attention and admissions have been limited to this number.

The children, all but one of whom live in the Borough, come to the unit each day for training. Some are brought by car but the older pupils travel by themselves on public transport or by cycle. Except for two afternoons each week, when the teacher carries out some of his other work, the unit runs on lines similar to a normal class. Its membership of the school is far from nominal ; in addition to their special training within the unit the children are absorbed in ones and twos into lessons alongside hearing children. During each week some nine members of the school staff are thus concerned with the partially deaf pupils. The headmistress, staff and children all ensure that the class " belongs " to the school as, indeed, does its teacher. Only in its small numbers, specialised equipment and its frequent visitors does it obviously differ from a normal class in the school.

The Aims.—The aims of the class are primarily to prepare as many partially deaf children as possible to take their places in junior schools alongside hearing children of the same age and comparable ability ; secondarily, as unit facilities do not extend beyond junior school age, to determine what form of education best suits the needs of each child at a senior school level. The possibilities range from full time special educational treatment in a residential school to education in a normal school with slight supervision.

The Children.—Of the seven children in the original class two are now in normal classes in the George Palmer School. A third child will be taken into a normal class shortly. (These children were described in last year's report as cases 6, 7 and 4 respectively).

Case 6—Female, aged 7 years.

Previous history :—Diagnosed as partially deaf at 1 year; previously attended ordinary school and received extensive home training from Speech Therapist.

Educational Capabilities :—I. Q. average; language development almost normal; speech has faulty sibilants; reading is one year retarded and arithmetic only 6 months; emotionally stable; very good home conditions.

Case 7—Male, aged 9 years 11 months.

Previous History :—Diagnosed as partially deaf at 6 months; used a hearing aid for past 18 months; previously attended an ordinary school.

Educational Capabilities :—I.Q. 95 (Matrices); language development 2 years retarded; speech normal except for sibilants; reading 2 years and arithmetic 1 year retarded; emotionally unstable and lacking in confidence; home conditions are good.

Case 4—Female, aged 8 years.

Previous history :—Diagnosis made at age of 1 year; previously attended ordinary schools but has had consistent speech training at home.

Educational Capabilities :—I.Q. 104 (Wechsler); language development 2 years retarded; speech, natural with faulty sibilants; retarded one year in reading and arithmetic; emotionally stable with good home conditions and co-operate parents.

Periodic attainment tests have shown that the children who have been returned to a normal school continue to hold their own alongside hearing children of similar intelligence and their teachers report that there have been no communication difficulties with these children.

Children remaining in the unit also progress in every way. The headmistress and others who see the children regularly comment on the remarkable way in which the children gain in confidence and stability. A noteworthy feature of the unit is the facilities it affords for social intercourse with normal children. All of the partially deaf children have a number of friends in the school and hearing playmates at home, from whom they unconsciously learn normal behaviour patterns and communication skills.

Three new cases have been admitted; a nine year old boy with congenital auditory imperception and a high tone hearing loss, a six year old boy with severe perceptive deafness and a very bright girl aged eight who was considerably retarded by persistent conductive deafness. Two further cases, children from residential special schools for the deaf were also admitted for short periods whilst receiving treatment at the Royal Berkshire Hospital. Admissions, therefore, since the inception of the class total twelve.

A close liaison is maintained with Mr. Hunt Williams, consultant otologist at the above hospital who undertakes the medical supervision of these children in relation to their handicap. Mr. Hunt Williams also advises on admittance to the unit. Seven children are now awaiting unit treatment.

Methods in Use.—The emphasis in the work of the unit is on two main aspects; basic subjects and communication. As the former consists of the three R's so does the latter consist of hearing, lip-reading and speech. On admission to the unit each child is given intelligence, attainment and hearing tests and a tape recording of speech is made. Individual educational, aural and speech programmes are devised accordingly.

The educational work is straightforward remedial teaching. The aural work (or auditory training) is a carefully devised scheme based on speech audiometry which is designed to measure ability not just to hear but to discriminate sound. Even with partially deaf children with up to 90 d.b. hearing loss it has been found possible to teach discrimination of speech to a 100% level of efficiency, although the intensity needed in these cases may be 115 d.b. or more.

Aural work consists of both individual and group training and ranges from discrimination between grossly different sounds to listening to tape recorded stories complete with sound effects. These stories have as their subject matter a wide range of history, geography, nature-study or scripture material; indeed, anything of educational or cultural interest including simple music. As the aural training takes effect, lipreading, still an important skill, becomes easier because more clues on the context are available through the ear. Speech takes on a natural quality and is easier to correct and improve. Some twenty or so hours every week are given over to such hearing training, but individual transistor aids are worn at all other times.

Future Needs. It is felt that a child rehabilitated both in attainments and in communication skill stands a good chance of maintaining progress throughout and beyond his school life but a close follow-up of all children from the unit placed in normal schools is necessary so that we may be sure.

The opinion that deaf children learn to communicate more easily if taught from an early age is now widely held. An approach to organised work with pre-school children is therefore being explored, and we hope to form another unit—for younger children—within the coming year.

Survey of Children with Defective Hearing attending Normal Schools, by Daniel Ling. (I have pleasure in giving an acknowledgment that this work is Mr. Ling's own original work.—E. Hughes, P.S.M.O.)

The work reported in this paper forms part of, and will be discussed more fully in, a thesis to be presented to the Cambridge University Institute of Education in satisfaction of the requirements for its Research Associateship.

The number of children with known hearing defect attending normal schools in Reading during the Autumn term of 1956 was 42. The severity of deafness among these children extended from less than 15 decibels to more than 60 decibels. A survey of all children in this group was designed and included assessments of hearing, speech, educational attainments, mental ability and social background. Some medical data was also recorded.

Purpose.—The purpose of this survey was to acquire sufficient information :—

(*a*) To evaluate present medical and educational provision ;
(*b*) To determine the immediate needs of individual children ; and
(*c*) To formulate a future general policy in the light of the findings.

Procedure.—Names of children concerned were obtained from the records of the School Health Service, the E.N.T. Department of the Royal Berkshire Hospital and from the head teachers of all schools.

The clinic, which was held in the unit for partially deaf children, occupied two afternoons each week. On the average, only two cases were seen during each session.

The children attended with their parents who were invited by letter. Duplicates of these letters were sent to respective headteachers for information. Attached to each duplicate was a request for the teacher's rating of each child. Details and an analysis of results are given below.

Three people were involved in the work of the clinic. Dr. G. O'Donnell administered intelligence tests and noted various medical data. Miss Ann C. Randle rated each child's speech and shared all other testing with the writer.

The Tests. (1) *Hearing.*—This was tested both by pure tone and speech audiometry. In the pure tone testing standard techniques were used. Testing was carried out on a Maico audiometer recently calibrated by Amplivox Ltd. to the standards set by the American Medical Association and the British Medical Research Council (not to B.S.I. standards). Both air and bone conduction tests were given but the latter were inconsistent and therefore discontinued. Speech audiometry, as used in this survey, is described separately at the end of this paper (page 20).

2. *Speech.*—This was assessed on the following three point scale :—*a*=within normal limits ; *b*=slight faults ; *c*=gross faults.

A tape recording of all children in categories *b* and *c* was made for reference purposes.

3. *Intelligence.*—Intelligence was assessed using the Stanford-Binet, Porteus Maze and Progressive Matrices tests.

4. *Educational Attainments.*—Diagnostic and Attainment tests by Schonell (1954) were used. Reading was tested by Test R. 1 and R. 3 ; Arithmetic by The Essential Mechanical and the Essential Problem Arithmetic Tests. Test R.1 measures from 5 years, the other tests from 7 years.

5. *Home Background.*—Parents' occupations were noted and a rating schedule adapted by the writer from Sommers (1944) was used to assess each home. The schedule comprises six sections ; Physical environment, emotional environment, education and culture of the home, parental attitudes to handicap, child's status in the family, and child's adjustment within the home. Each section has a five point rating. The completion of this work involved visits by the writer to the home of each child concerned.

6. *Social Maturity.*—This was measured by the Australian version of the Vineland Social Maturity Scale by Doll (1936).

7. *Teachers' Ratings.*—These were limited to six personality factors ; disposition, concentration, behaviour, self-confidence, initiative and emotional stability. Teachers were asked to rate each factor on a five point scale regarding C as average.

8. *Medical Data.*—A brief history of treatment was taken, details on the use of hearing aids were noted and evidence of cross laterality and additional defects was recorded.

Results.—Of the 42 children (11 girls and 31 boys) called for assessment only three failed to attend : one had left the area and the other two were receiving treatment at the Royal Berkshire Hospital.

Hearing Tests.—Pure tone results are given throughout as an average over the five frequencies 250-4,000 c.p.s. Speech Audiometric results are expressed as percentage discrimination loss (see table 2 below). All results refer to hearing in the better ear only.

The following tables show the distribution of defect in terms of severity as measures by (*a*) pure tones, (*b*) speech audiometry.

TABLE 1

Hearing loss	Less than 25 decibels	25–40 decibels	40–60 decibels	More than 60 decibels
Number of children ...	21	10	7	1

TABLE 2

Discrimination Loss	Nil	0 to 10%	10 to 40%	More than 40%
(*b*) Number of children	8	13	15	3

Speech.—The following table shows distribution of speech defect found within the group in terms of severity:—

TABLE 3

Severity of Defect	(*a*) (within normal limits)	(*b*) (slight faults)	(*c*) (gross faults)
Number of children ...	17	20	2

Intelligence.—The following table shows the distribution of intelligence within the group as measured by the three tests:—

TABLE 4

Rating (I.Q.)	(*a*) Over 127	(*b*) Over 111	(*c*) 89 to 111	(*d*) Under 89	(*e*) Under 73	Total tested
Stanford-Binet ...	1	10	19	4	2	36
* Progressive Matrices	5	13	19	2	—	39
*Porteous Maze ...	12	10	12	2	—	36

* *Performance Tests*

The three children who were not assessed on the Stanford-Binet and Porteous Maze tests scored a "*c*" rating on the Progressive Matrices scale.

Educational Attainments.—Only one child in the group of 39 children tested showed no retardation. All other children were retarded in either reading or arithmetic or both.

Retardation is expressed in relation to the mental age of each child. Mental ages were calculated from the Stanford-Binet I.Q. where this was obtained. In the remaining three cases the Progressive Matrices rating was used (retardation in relation to actual age is similar but less marked).

The following table shows average retardation in months on all four tests in terms of severity of defect as measured by pure tones:—

TABLE 5

Severity of Defect	Under 25 decibels	25 to 40 decibels	40 to 60 decibels	Over 60 decibels
No. of children	21	10	7	1
Test R. 1	16 m.	20 m.	27 m.	—
Test R. 3	9 m.	11 m.	19 m.	—
Problem Arith.	14 m.	25 m.	35 m.	16 m.
Mechanical Arith. ...	14 m.	23 m.	29 m.	9 m.

The following table shows average retardation in months on all four tests in terms of severity by speech audiometry:—

TABLE 6

Discrimination loss	Nil (under 25 decibels)	Under 40%	Over 40%
No. of children	8	28	3
Test R. 1	16 m.	18 m.	41 m.
Test R. 3	10 m.	8 m.	43 m.
Problem Arith	15m.	20 m.	41 m.
Mechanical Arith. ...	14 m.	19 m.	41 m.

The following table shows average retardation in months in terms of chronological age:—

TABLE 7

Age range of children	Under 8 years	8 to 11 years	Over 11 years
No. of children	14	15	10
Test R. 1	13 m.	19 m.	15 m.

Results of Test R.1 are given in this table as this test measures from a 5-year level.

Home Background.—The social status of the children in terms of their parents' occupations and the type of deafness found in relation to it is expressed in the following table :—

TABLE 8

Parents' Occupation	Professional	Clerical	Skilled Manual	Unskilled Manual	Other	Total
Conductive Deafness	2	2	10	15	3	32
Perceptive Deafness	2	3	—	2	0	7
Total	4	5	10	17	3	39

Twenty-seven children had homes which were average or above on all six sections of the rating scale. Of the remaining 12 children all had a poor physical environment and homes where little or no interest was shown in any educational or cultural activity.

Social Maturity.—Mental and social ages corresponded more closely than chronological and social ages. There was no obvious trend towards social retardation.

Teachers' Ratings.—The following table shows the distribution of the 32 ratings received :—

TABLE 9

Rating	A	B	C	D	E
Disposition	3	5	20	4	–
Concentration ...	1	5	13	12	1
Behaviour	3	6	18	5	–
Self-Confidence ...	–	3	17	10	2
Initiative	–	2	14	16	1
Emotional Stability ...	–	3	25	4	–

Medical Data.—Defects additional to deafness found in the 39 children studied were as follows :—

Defective vision	4
Muscular deficiency	1
Congenital heart defect	1
Cross laterality	6

Histories taken showed that 28 children had received treatment at the E.N.T. Department of the Royal Berkshire Hospital over periods ranging from a few months to more than ten years. A study of past audiograms in these cases showed that severity of defect in the majority of the cases varied considerably.

Hearing aids, worn by 11 children in the group, were mainly medrescos. One child had a transistor aid and another a commercial monopak. Details of use were as follows :—

Worn all day	2
Mainly in school	4
Only in school	3
Rarely or not at all	2
Total ...	11

Two children liked their aids, three expressed dislike and the remainder were indifferent.

Discussion of Results.—The proportion of boys known to have defective hearing in Reading is remarkably high, but it is unlikely that such a proportion is general. For instance, the results of an audiometric survey in which over 48,000 ears were tested are published by the Principal School Medical Officer of Birmingham, Dr. H. M. Cohen, in his Annual Report (1955) and they show no significant sex difference. The explanation may be implicit in a comparison of referral and audiometric survey methods of detection.

Hearing. The difference between normal hearing as measured by this particular speech audiometric test and the onset of discrimination loss is 25 decibels. Thus tables 1 and 2 can be compared. Comparison shows that 21 children have less than 25 decibels hearing loss for pure tones whereas only 8 children have less than 25 decibels loss for speech. Thirteen of these 21 children, therefore, have greater difficulty in hearing speech than their pure tone audiograms would indicate. Further comparison of the two tables shows a similar trend.

Speech.—Twenty-two of the 39 children studied had speech defects. Both cases in which gross speech defects were found required special educational treatment as partially deaf children but in general the severity of speech defects within this group did not indicate the degree of deafness. Several parents of children with speech defects reported that they suspected the presence of hearing difficulty at or before the age of three years. A knowledge of the high incidence of hearing loss in speech defective children might well lead more parents to have their children's hearing tested at pre-school age.

Intelligence.—All three tests showed this group to be skewed towards greater than average intelligence.

The Porteous Maze tests gave very high results, especially with older children. This latter phenomenon is, of course, to be expected and the Porteous Maze tests were used only as a facile adjunct to the revised Stanford-Binet.

Results obtained on the Progressive Matrices were higher than those obtained from the Stanford-Binet scale. Subtle difficulties due to hearing defect may well account for part of this difference. Many workers have found marked discrepancies in scores between various verbal and non-verbal tests in surveys of children with defective hearing. (See Barker, Wright and Gomick, 1946).

Educational Attainments.—Assuming that (*a*) the Stanford-Binet scale measured the mental ages in this group satisfactorily and (*b*) the norms published by Schonell for the educational tests used hold good in the schools of Reading, then the results shown in tables 5, 6 and 7 are reliable. In the absence of a control group this will be assumed.

Such general retardation of children with defective hearing of all degrees were also found by the Scottish Council for Research in Education and published in " Hearing Defects in School Children " (1956).

Although retardation varies in general with the severity of the defect (see tables 5 and 6) a significant degree of backwardness is apparent in children with slight hearing loss. Until now, children with up to about 35 decibels pure tone loss have been classified as Grade 1 according to the proposals of the Report to the Board of Education (1938) and regarded as capable of full benefit from normal education "without change or addition " (page 50).

Although the reliability of scholastic tests under 7 years is open to question, much of the retardation appears to occur during the first three years of schooling (see table 7). One answer to backwardness in children with slight hearing loss may well be earlier detection—at or before 5 years of age—and speedy medical and/or educational treatment.

The reasons for retardation in children with slight hearing defect is not known. It seems reasonable to suppose that adverse noise conditions may affect slightly deaf children more than normally hearing children ; thus retardation may be caused by the bad accoustic properties and the intermittent extraneous noises of the average classroom.

But in interpreting the results given in tables 5 and 6 it should be borne in mind that some of the children with less than 25 decibels hearing loss were apparently retarded by a more severe conductive deafness at an earlier age which has since responded to medical or surgical treatment.

Home Background.—The proportion of cases with conductive deafness was greater among children in the lower social groups (see table 8). Average retardation varied little, neither between these social groups nor in relation to home rating scores, but speech defects were fewer in children from above average homes.

Social Maturity.—There was no evidence of social retardation such as was found by Bradway (1937) in Schools for the Deaf. This may well be due to constant social stimulation present in normal as compared with special schools.

Teachers' Ratings.—Table 9 shows that teachers tended to rate the children above average in disposition and behaviour but below average in concentration initiative and self-confidence. The majority were rated average in emotional stability. As the group is small and no control ratings were made the trends indicated may not be significant but individual ratings, where qualified by comments, helped the team to assess the effect of deafness more adequately in particular cases.

Medical Data.—Apart from absence in the one case already mentioned, the effect of the additional defects shown is difficult to assess. For example, of the six children who were found to be cross lateral two were retarded by more than three years and the remaining four children by no more than a few months. The two children severely retarded had vastly different I.Q.s on the Stanford-Binet Scale—134 and 91 respectively. Deafness in each case was comparable, and both children were left eyed and right limbed.

In most cases the exact age at onset of conductive deafness could not be established but it has been noticed by many parents when the child was three years of age. No evidence of the effect of deafness over various periods can be presented owing to the lack of precise information. This is to be regretted as duration probably has considerable influence on attainment.

Variation of deafness was reported by most parents and was confirmed by subsequent follow-up study at the Royal Berkshire Hospital. This variability was mainly associated with colds and often persisted in spite of treatment. No child in the group was reported as having less than three colds a year.

In general the use of hearing aids was not satisfactory. Greater benefit could have been obtained from aids if the children had used them either more frequently or more judiciously. (These observations led to the institution of a scheme in which the issue of any hearing aid is accompanied by a programme of auditory training and instruction in the use of the aid. This programme will be under the direction of Mr. R. Hunt Williams, consultant otologist at the Royal Berkshire Hospital).

Conclusions. Present provision needs to be modified with a view to preventing retardation in school work. To this end the most necessary steps appear to be :—

(*a*) The institution of a programme aimed at detection and treatment at and before the age of 5 years, and

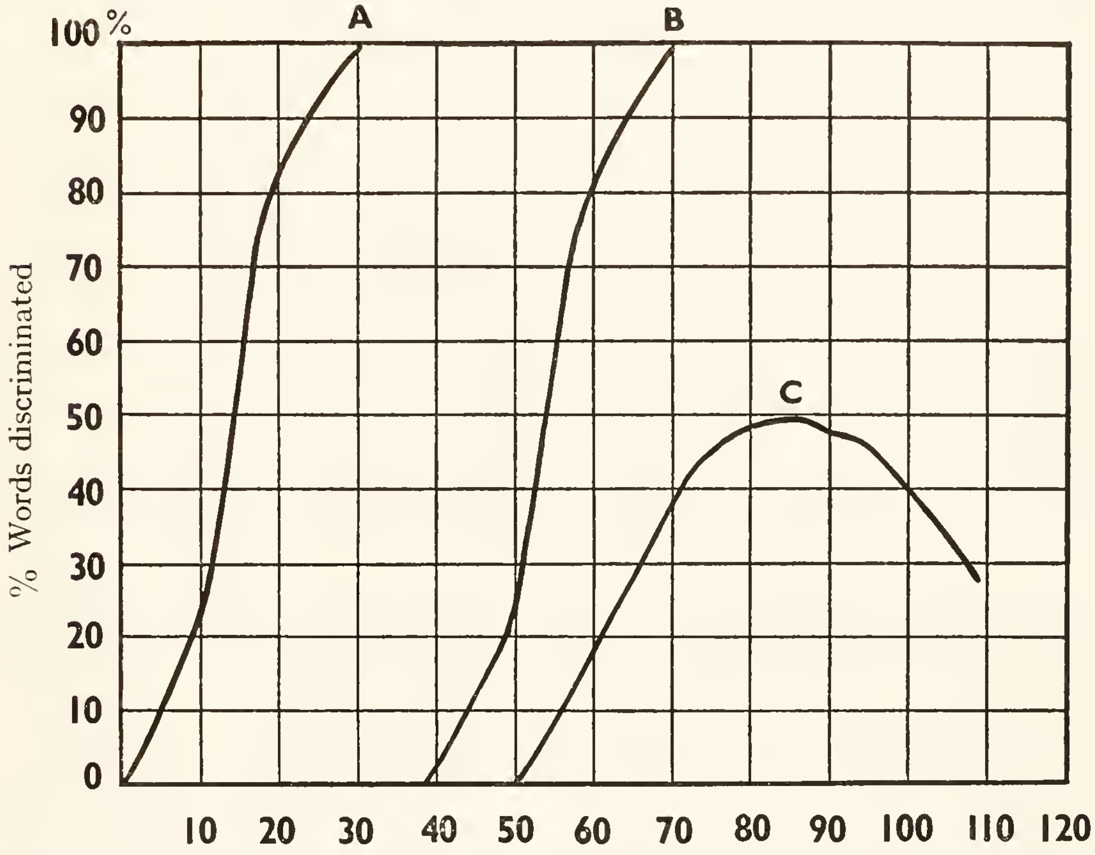
(*b*) The formation of a centre, preferably under the aegis of the School Health Service, to which all information on deaf children within the Borough is passed and from which all services for deaf children can be co-ordinated.

Speech Audiometry. Speech audiometry, because it is relatively new and has not been used clinically by the School Health Service before, needs some introduction. The following description tells how this particular hearing test was constructed and how speech audiometric data can be recorded and interpreted.

The test consisted of several lists of ten nouns, all of which were recorded at a constant level of intensity at H.M.V. studios. Each list comprised two sub-groups of five words containing the same vowel sound. Discrimination was thus largely limited to consonants. The words, all of which were illustrated, were played back at various known levels through earphones and the children responded by pointing to appropriate pictures. The test was first standardised on fifty normal ears of children aged 5-11 years. The norm obtained is shown below as Case A.

Results of speech audiometry are recorded on a chart known as a speech audiogram. The score, which is expressed as a percentage, is plotted against the intensity, expressed in decibels. In the following speech audiogram three cases are shown. Case A has normal hearing, case B has a 40 decibel conductive hearing loss and Case C has a 50 decibel nerve deafness. Each case is typical.

Speech Audiogram



Intensity levels in decibels

The interpretation of the speech audiogram is simple. Speech is heard at various levels of intensity. Approximate levels for quiet, moderate, and loud speech are 55, 70 and 85 decibels (see Hirsch 1952). The average percentage failure as measured by speech audiometry at these three levels is known as " Discrimination Loss " and this indicates the proportion of difficulty experienced in the course of a normal day's listening. For instance, Case B (above) is hampered by his defect by 17% whilst Case C finds 60% of speech difficult to discriminate.

Adults can lose quite a lot of hearing before they are in any difficulty because their wide and long experience of listening helps them to understand what is being said and to "fill in" the conversation from its context. In school children, however, as experience in listening is limited and new lesson material is an unknown context particular attention should be paid to discrimination loss as revealed by speech audiometry, and some form of special provision made.

Speech audiometry is important as a test of hearing because a child who has only a slight hearing defect as measured by pure tones may have a serious defect for hearing words. Speech audiometry is a direct measure of such a defect. As the most important medium of education and communication is speech its significance is obvious.

It is, of course, a logical development of the well established whisper and voice tests of hearing. Its advantage is its standardisation.

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(*e*) *Educationally Subnormal.*—During the year 129 children suspected of being educationally subnormal or of having severe educational difficulties, were examined by the approved Medical Officers. In each case the examination consisted of an intelligence test, at least one performance test, and a physical examination.

The following list gives the results of the assessments of these children.

New Cases—	*Boys*	*Girls*
Total number of children examined	67	23
E.S.N. children recommended for special school	16	6
E.S.N. children recommended for continuance at ordinary school	15	6
Maladjusted children	3	2
E.S.N. and maladjusted	2	0
E.S.N. and other significant defects	5	2
Ineducable	4	1
Average intelligence	22	9
For further investigation	3	0
Reviews—		
Total number of children examined	22	17
To continue at special school	14	7
To continue at ordinary school	4	3
Withdrawal from handicap register	1	0
Ineducable	0	2
For statutory supervision on leaving school	3	5

A good deal related information must necessarily be obtained from these investigations for, before any final opinion is given, every aspect of the child's progress and background has been studied. It may be of interest to record that in 14 cases there was clear evidence that cross laterality was responsible for educational attainments far below those appropriate to the mental age, and that in each instance the I.Q. was between 70 and 100. This accords with the ten cases quoted last year and with the accepted viewpoint that it is chiefly in the case of the dull child that irregular dominance with its attendant reversal symptoms exerts most effect.

When considering those definitely classified as educationally subnormal children, the family background was noteworthy in 21 instances. Although only 5 children came from homes where neglect and squalor were on a classical scale, the others showed varying degrees of inadequacy and in 12 cases, one of the parents was known to be of very low intelligence. In the case of the maladjusted children and those found to have average intelligence but to be working far below their intellectual capacity, the domestic situation was again dominant and a history of parental discord, divorce, or separation commonly elicited.

(*f*) *Epileptic.*—The School Health Service has under observation 35 pupils who suffer from either the grand mal or petit mal forms of epilepsy. Two of these children are resident at the Chalfont Colony, 9 attend the Avenue School, and the remainder are educated in ordinary schools. One child who was receiving home teaching underwent such progressive mental deterioration that it was necessary to make a report of ineducability. Those attending ordinary schools are either cases of petit mal or else grand mal of infrequent occurrence. Severer cases attend the Avenue Special School where careful supervision and adherence to regimen curtail the frequency and severity of the seizures. Special care is taken to see that the child remains alert and interested as intellectual preoccupation is a well-known factor in the prevention of epileptic attacks.

Since it is important that these children should remain in a normal environment and not grow up feeling that they are a race apart, the attitude of the teaching profession in Reading in their acceptance of the epileptic child is both generous and far-seeing.

(*g*) *Maladjusted.*—The Berkshire and Reading Local Education Authorities have co-operated since 1948 in the provision of a service of Child Guidance Clinics in the County and Borough. This service has been administered by a Joint Committee representing the two Authorities.

The Reading Authority have for some time wished to expand their side of the service by the appointment of an Educational Psychologist to work part-time in the schools and part-time in the clinic. It is anticipated that this would effect a closer liaison with the schools. They also wish to see a greater integration of Clinic Services with the School Health Service. These aims have been somewhat difficult to achieve while the Clinic is administered independently and directly by a Joint Committee and therefore, in agreement with the Berkshire Authority, it is proposed to end the present arrangements early in 1957. With the co-operation of the Oxford Regional Hospital Board it is then hoped to provide a full Child Guidance Service consisting of a part-time Psychiatrist, an Educational Psychologist, Psychiatric Social Worker, and clerical assistance.

The report of Dr. M. E. Ward. Psychiatrist, Berkshire Child Guidance Clinic, reads :—

Reading Education Authority have decided to discontinue the present joint Child Guidance Clinic run in association with the Berkshire Education Authority, and to set up a separate service of their own as from 1st April, 1957. It has been a difficult year for the Child Guidance Clinic Staff owing to uncertainty about future arrangements and the approaching disintegration of the present well established Clinic. There has been a reduction in the number of Reading Borough cases referred and treated, but this recession of work should be only temporary. It is intended to increase both the staffing and scope of the Clinic work particularly in the education field when the new Reading Child Guidance Service is established. Some of the present Child Guidance Clinic Staff will continue to work in the Reading Clinic and continuity of treatment of Reading cases will be preserved as far as possible.

No. of cases brought forward from previous year	178
No. of new cases referred	52
No. of cases re-opened during the year	5
Total No. of cases seen for Consultation and Treatment	128
Total No. of cases treated	33

No. of cases closed	68
After Consultation and Advice only	29

No. of cases treated and closed :—

Adjusted	0
Improved	6
No change	3
Closed after Advice and Supervision	24
Prematurely closed	2
No. of cases closed Not Seen	3
No. of cases closed after Social Work only	1

No. of Interviews :—

For Psychiatric Examination	55
For Intelligence Test	57
For Treatment, including remedial coaching	435

No. of P.S.W. Interviews	399

No. of children admitted to Hospitals for Maladjusted Children	8
No. of children discharged from Hostels for Maladjusted Children	11
No. of children in Hostels on 31st December, 1956	8

(*h*) *Physically Handicapped.*—Only 2 children are receiving education at a residential school, the remainder of the physically handicapped attend ordinary schools, the appropriate department of the Avenue School, the class for spastic children at the Battle Hospital, or else receive home teaching.

This handicap group comprises a very varied assortment of conditions—post-poliomyelitis paralysis, progressive neurological disease, accidental injury, and cerebral palsy being dominant. Most of these group defects differ widely in their effect upon the individual and each case must be treated on its merits.

Where possible the physically handicapped child is retained in an ordinary school so that his outlook and endeavours are inclined to those of a normal child and, by continuing familiarity with the unquiet world, his consciousness of difference and defect is gradually eclipsed. In this regard the attitude of teachers and fellow pupils is paramount, for a momentary impatience or a careless gibe may easily wither the early burgeonings of independence and self-respect. In Reading we seem to be doubly fortunate for the occasional severely handicapped child deemed suitable for an ordinary school is accepted willingly by both staff and pupils. Indeed in some instances the continuance of a handicapped child at an ordinary school would not be possible without the extra duties and responsibilities undertaken by the school community.

Special Class for Cerebral Palsy.—This class is sited at the Battle Hospital where the necessary medical services are freely available. The children attending are given physiotherapy and speech therapy as well as an initial education appropriate to their needs. However, this unit is not intended to provide a complete educational service for spastic children, rather does it provide a means of classification by which their progress and capabilities can be gauged and a considered evaluation of their educational needs undertaken.

At present there are 5 children in the unit, 3 girls and 2 boys, all of whom are considerably handicapped, 1 other boy who was a member of the class since its inception, was admitted to the E.S.N. department of the Avenue School during the year and has made good progress. When the new accommodation at the Avenue School is completed it will be necessary to reassess these children and transfer those whose potentialities justify it. Unfortunately in some cases this period of supervision and observation has only confirmed an initial impression of ineducability.

This year it has been possible for us to maintain an even closer contact with children afflicted with this handicap as Mr. Squire, the Consultant Orthopaedic Surgeon, has kindly invited one of the School Medical Officers to attend his Spastic Clinic at the Battle Hospital. By this we become acquainted with pre-school cases at the earliest possible moment and can assess their educational needs well in advance.

CLASSIFICATION OF CEREBRAL PALSY CASES

(1) According to Educational Potentialities	*Boys*	*Girls*
(*a*) Pre-School	4	6
(*b*) Ordinary School	8	3
(*c*) Avenue Special School	8	3
(*d*) Battle Special Class	2	3
(*e*) Residential Schools	–	–
(*f*) Formally ascertained as Mentally Defective	3	7

(2) According to Age	*Boys*	*Girls*
Under 5 Yrs.	4	6
5-10 yrs.	13	6
10-16 yrs.	9	6

(*i*) *Speech Defects.*—Miss Randle reports :—

206 children, 150 boys and 56 girls, attended the Speech Clinic during 1956.
3,965 attendances were made
42 discharged cured or greatly improved
6 left the district before treatment was completed
4 left school before treatment was completed
6 taken off the register for non-attendance
1 refused treatment
147 continued into 1957
111 cases of dyslalia
6 cases of dyslalia due to deafness
5 cases of retarded speech development
38 cases of stammering

12 cases of stammering and dyslalia
10 cases of cerebral palsy
7 cases of cleft palate
2 cases of dysarthria
9 cases of disordered vocal resonance
1 case of congenital auditory imperception

In cases where it was necessary, children were referred for hearing and intelligence tests and also orthodontic treatment. A certain amount of time was set aside for school and home visits and interviewing parents.

Clinics were held at Queen's Road, Whitley, and Southcote Clinics, and the Avenue, the Hill, Emmer Green, Grovelands, Geoffrey Field, Battle, Battle Hospital, Southcote, St. Michael's, and Wilson Schools. The Deaf Unit at George Palmer School was also attended for the purpose of assessing the speech of and testing children with hearing loss.

What does the term "Speech Therapy" mean to you? I have received many and varied answers to this question :—"I haven't a clue!" "A sort of elocution I suppose," "Something similar to physiotherapy," "Do you deal with accents?" Only very occasionally have I had the reply—"Dealing with people who stammer or who cannot talk properly, isn't it?"

As there seems to be so much confusion as to the scope of speech therapy—which is understandable, as it is a relatively new profession—I feel that it might clarify the position if I give a brief account of the types of speech defect and some of the fallacies which exist concerning the causes and treatment of speech defects.

A short definition of speech therapy is :—The treatment of defects and disorders of speech, voice and language. The words "treatment" and "therapy" infer that speech therapy deals with the medical side of speech, as opposed to elocution, which deals purely with the aesthetic aspect. The speech therapist does not therefore, try to eliminate accents, as these do not hinder the understanding of the child's or adult's speech in his own environment. She does, however, deal with those whose speech habits differ—for psychological or physiological reasons—from the accepted standard of so-called "normal speech." The therapist is concerned with helping the patient to achieve fluent, intelligible speech, and a voice free from strain, not with training him to appear on the stage or a public platform. The training of a speech therapist includes detailed study of anatomy and physiology, psychology, phonetics (the physical formation of speech sounds) neurology and the pathology and treatment of the various speech defects. An elocutionist, on the other hand, concentrates more on the study of improvement of normal speech, including the elimination of accents, and on voice production and stage and platform technique.

The different forms of speech defect are various, the most common one amongst school children being dyslalia, which accounted for over 50% of our patients last year. Dyslalia is the substitution of sounds, such as putting a "t" instead of a "c" at the beginning of "cat," and the term embraces everything from a simple lisp—simple dyslalia—to unintelligible speech—general dyslalia. The cause of this defect is obscure, but very rarely is it anything of a physical nature. A degree of deafness can cause dyslalia, but apart from very rare cases of faulty dentition, this is the only physical cause of any significance.

Many people have been heard to say that a dyslalic child is tongue-tied or does not open his mouth sufficiently. These theories are both fallacies. If a child is tongue-tied, it is noticed soon after birth by the baby's inability to raise his tongue towards his hard palate to suck, and is dealt with immediately. Consequently, the tongue will be sufficiently mobile for speech when the child reaches the relevant age. In so far as opening the mouth is concerned, no child, however widely apart his lips may be, will make correct sounds if he is placing his tongue incorrectly!

Another speech defect, or rather disorder with a high incidence, is stammering, and this probably is the most easily recognised speech irregularity. Because of this, there have ariser many and varied opinions concerning its cause and treatment. First and foremost—a stammer has no physical origin, but it is a sign of mental tension. Physical tension, nervous tics and faulty breathing are found in concomitance with a stammer, but are not the causes of the speech disorder. A stammerer has a temperament (very often inherited) which reacts to anxiety and stress by producing a disturbance in speech. The fact that he is aware that he stammers increases the anxiety and thus perpetuates the speech irregularity. It is therefore very important not to emphasise the fact that a small child stammers, or to draw his attention to it in any way. It is quite normal for a child to stumble over his words when he is beginning to speak, as learning to talk is a very complex business. No one expects a baby to begin to walk without stumbling, and the same rule applies to learning to talk.

Because it is so important that a young child should not be anxious about stammering, it is unwise to tell him to take a breath before he speaks, as this will make him far too conscious of the act of speaking, which should be spontaneous, and will thus increase tension. Similarly, it is of no use to encourage a stammerer to tap his foot or tap the desk when he is speaking, for this too, is making him speech conscious. Although these habits may have a short-lived success, they are replaced by other far more noticeable actions and tics which increase tension and make the child's defect far more apparent. The aim of the speech therapist is to decrease anxiety and thus release tension permanently.

Although the two main speech defects which are prevalent in children have no physical cause, there are others which arise from physical damage, malformation or inadequacy. These are:—dysarthria, dysphonia, dysphasia, and cases of disordered vocal resonance—hyper-rhinophonia and hypo-rhinophonia.

Dysarthria is disjointed, spasmodic speech, caused by irregular movements of the organs of speech—the tongue, lips, and soft palate. These irregular movements are the result of damage to the nerve supply of these organs.

Dysphonia, or difficulty in producing voice, is manifested by chronic hoarseness and may be due to either psychological or physical causes, the latter being more common. In most cases, dysphonia is a result of continual strain or misuse of the vocal cords, although damage to the nerve supply of the cords can also produce this type of voice. It is found only very occasionally in children, although it may appear as a sign of tension in a stammerer. More often dysphonia develops in adults who have misused their voices over a period of time by forcing when singing or by continual shouting. In some cases, nodules may develop on the cause as a result of friction and the voice will not return to normal until these have either been removed by surgery, or disappeared as a result of total rest of the voice.

Dysphasia is a disorder affecting the ability to express oneself in words and is caused either by damage to or degeneration or agenesis of brain tissue. The patient is usually perfectly capable of moving his organs of speech in order to make sounds but finds difficulty in interpreting what is said to him and in recalling the words he wishes to use. This disorder also, is more common in adults than in children, often appearing after cerebral haemorrhage.

Hyper-rhinophonia and hypo-rhinophonia—too much and too little nasal resonance respectively—are found in children relatively frequently. A child with a cleft palate or a paralysed soft palate, is unable to regulate the amount of air passing into his nasal cavities. Because of this, too much air escapes through his nose and he produces rather a weak, breathy type of voice with indefinite consonant sounds. This type of speech may also occur after the removal of tonsils and adenoids which had previously been preventing the passage of air through the nose. However, once the child has become accustomed to the fact that he can breathe freely again, he usually regulates the amount of air passing through his nasal cavities of his own accord, and his speech returns to normal. Hyper-rhinophonia is often referred to as "cleft palate type of speech."

Enlarged tonsils and adenoids, chronic mouth-breathing, nasal obstructions and chronic catarrh may produce hypo-rhinophonia or "adenoidal speech," as it is often called. A child with this type of speech does not "talk down his nose" as so many people say! In fact, he does precisely the reverse, as air is totally unable to pass through his nose. In cases of hypo-rhinophonia speech therapy is of little use without surgical or medical treatment. If the defect persists after such treatment, the speech therapist may then help the patient to change his faulty breathing and speech habits.

The only other speech irregularity which is found to any extent in children is retarded speech development. This may be due to mental defect, deafness, a neurological condition such as cerebral palsy, or a purely psychological cause. As the term suggests, the child is behind normal age in his speech development. The task of the therapist in such cases is to attempt to diagnose the cause of retardation and then to refer the child for any other special educational or medical treatment if necessary. Many children with speech retardation develop into dyslalics when they eventually learn to talk and are then treated as any other child with dyslalia.

Although there are other more rare types of speech defect which come within the scope of the speech therapist, those described above occur the most frequently among children of school or pre-school age. The therapist has the children referred to her by the School Medical Officers and carries out the treatment she considers to be relevant until the maximum improvement has been achieved.

The Avenue Special School. Mr. G. Ross, M.A., Headmaster, reports:—

There was a diminution in the roll of the Open-air School of 11 children from that of December, 1955, although at that date no fewer than 8 children returned to their own schools or left for employment. During the year 1956, 2 boys and 1 girl left to take up appropriate jobs, and 2 boys returned to ordinary schools. Three boys and 1 girl left the district and 1 asthmatic boy was admitted to hospital for long term treatment. Five boys and 1 girl were admitted and one boy returned to school from hospital treatment.

A considerable number of the children in the Open-air School not only suffered from indifferent health but were educationally very backward. Not a few cases presented challenging educational problems. Many of such children, admitted three or four years ago, with returning health are now showing the success of the work of the teachers and are ready to enter secondary schools.

The children admitted during the year were, with one exception, of primary school age. This once again emphasised the growing evidence of good healthy conditions throughout the borough, and the benefits of medical supervision, re-established at full strength only within the last few years. While there are always a few children who will require some special attention there will be no danger of their not receiving that as soon as the need is detected, and the provisions in the school extension presupposes this remedial work at primary school age and a gradual elimination of any need for provision in the older age groups.

For all the children in the Open-air School and—it is to be noted—for any children in the other department who require it, there is additional nourishment provided in the form of a double milk "ration" daily and a breakfast in school of a nature selected to improve strength and vitality.

The Physically Handicapped Department showed no reduction in roll and perhaps a little more than the usual fluctuations during the year. Two girls and 2 boys left for employment.

In addition a boy left to attend a residential vocational training centre. Two girls and 1 boy returned to ordinary school and a boy and a girl were admitted to hospital. Six boys and 3 girls were admitted and a boy and girl re-admitted after hospital treatment.

The sub-normal department has been full throughout the year. Seventeen children were admitted while 12 left ; 5 boys and 3 girls for employment, a boy and a girl for boarding school and a boy was transferred to the physically handicapped side.

The following table shows the changes in the rolls of the three departments :—

Department	Educationally Subnormal		Physically Handicapped		Delicate	
	Boys	Girls	Boys	Girls	Boys	Girls
On Roll, January, 1956 ...	55	22	26	9	27	13
Transferred to Ordinary School	—	—	1	2	2	—
Transferred to E.S.N. Dept. ...	—	—	1	—	—	—
Transferred to P.H. Dept. ...	1	—	—	—	—	—
Transferred to O.A. Dept. ...	—	—	—	—	—	—
Admitted to Hospital or Residential School	1	1	1	1	1	—
Left district	—	—	—	—	3	1
Left for Employment ...	5	6	1	1	2	1
Left for Training	—	—	2	—	—	—
Admitted during the year ...	7	10	5	3	5	1
Re-admitted	—	—	1	1	1	—
On Roll, December, 1956 ...	55	25	26	9	25	12

The domestic science classes for the older girls at Katesgrove Secondary School stopped in July in anticipation of the completion of the school extension. The specially designed premises for the delicate and handicapped children will be ready in the summer and there is included housewifery accommodation. Swimming instruction continued with success and the number of certificates awarded was as follows :—18 certificates to boys and 5 to girls. There were extremely pleasing displays of art and craft at Parents' and Prize Day. Once again His Worship the Mayor presented the prizes before a large gathering of parents and friends. The school travelled to Littlehampton for the day's outing, and Christmastide festivities differed from the previous type by the introduction of a Nativity Play, very well presented by the younger children with "props" made by the older boys under the direction of their crafts teacher.

The centre at Battle Hospital for the classification of children severely handicapped by cerebral palsy continued, and additional visits by the speech therapist was added to the working of the physiotherapists. One boy was admitted to school and a girl left the district, reducing the numbers to 3 girls and 2 boys.

Receiving teaching at home are 5 of the children included in the last report ; 2 boys suffering from muscular dystrophy ; the girl who is a hospital patient ; the girl who, recovering from a brain operation, has extended her attendance at school to all but one day in the week ; and the girl whose psychological condition prevented her from going to school. Another little hospital patient recovered with pleasant rapidity to return to her primary school. A girl of eleven years of age is responding most pleasantly to the extension of her mental horizon in assisting her to overcome a perplexing physical disability. A little boy who joined the "home teaching club" at the beginning of the year was able to attend the P.H. school for three afternoons by the end of the year. An older boy from a grammar school is continuing his English and Mathematical studies in hospital and if his health permits he will attempt to take the General Certificate in these subjects next year.

Home Teaching Cases.—A proper appreciation of the work of the home teacher would not be possible without an acquaintance of the type of case undertaken. For this reason, a brief history of the children receiving home teaching is included.

(1)—A boy aged 9 years who is a case of congenital heart disease with cyanosis not amenable to surgery. He is a bright and intelligent lad who was admitted later in the year to the physically handicapped department of the Avenue School.

(2)—A boy of 12 years afflicted with progressive neurological disease who is confined to a wheelchair. Home teaching has provided a constant interest and purpose to a life whose horizons are gradually drawing in.

(3)—A boy of 12 years with pseudo-hypertrophic muscular-dystrophy also restricted to a wheelchair. In this case the prognosis of the disease and the reasons motivating home teaching are the same as in Case 2.

(4)—A girl aged 13 years with fragilitas osseum who has been confined to a frame in a hospital ward for some years. Recently she has been fitted out with a large "pram" and this increased mobility has brought added variety to her life. She now attends for lessons in a special schoolroom provided by the Hospital and also visits her friends outside.

(5)—A girl of 15 years who has been operated on for a brain tumour. She has now been able to return to school on a part time basis and home teaching has been reduced to a minimum.

(6)—A boy of 7 years with a left-sided hemiparesis due to an unspecified encephalopathy. He maintained such excellent progress and morale that it was possible to admit him to the physically handicapped department of the Avenue School on a part time basis.

(7)—A girl of 12 years of an extreme obesity. She is quite normal mentally and has made very satisfactory educational progress.

(8)—An epileptic girl aged 11 years who due to a high daily incidence of grand mal and petit mal attacks is unfitted to attend school. Unfortunately these have occasioned a progressive mental deterioration and towards the end of the year home teaching was discontinued and occupational therapy substituted.

(9)—A boy of 15 years who combines a spastic condition with an intractable psychological disturbance. He has attained quite reasonable educational standards and is a voracious reader although he will not talk to his teacher or to those who are not intimates.

(10)—A girl of 13 years with a psychosis. She developed a morbid fear of school which eventually encompassed even her home teacher whose visits had to be discontinued for this reason.

Those who are familiar with the work of the home teachers will appreciate that they are a major factor in upholding the morale of the sick child. The desire for education and the appurtenance of normality implied therein is a constant manifestation in these cases and they bring an enthusiasm and purpose to their lessons that would occasion some consternation in the healthy child.

SPECIAL INVESTIGATIONS

(1) **Tuberculosis Survey.** A combined survey was undertaken by the School Health Service and the Oxford Regional Hospital Board with the object of comparing the incidence of tuberculosis among the household contacts of the positive and negative Mantoux reactors in children born in 1943. As these children would be due for B.C.G. vaccination in 1957, a procedure that would necessitate further Mantoux testing, it was decided to advance this by some six months and offer B.C.G. vaccination to those taking part in the survey.

A letter was sent to the parents concerned in which the purpose of the survey was outlined and asking consent for their child to have (1) a Mantoux test (2) and X-ray (3) B.C.G. vaccination if indicated. Participation was secured for 920 children and these attended at No. 2 Mass Miniature Radiography Unit, Gun Street, Reading (Director, Dr. James), where they received their Mantoux test from the School Medical Officers and were subsequently X-rayed by the M.M.R. staff. The results of the Mantoux test were read at the School Clinics and B.C.G. vaccination administered to those who were Mantoux negative. This latter group received a conversion Mantoux test some three months later.

The school nurses visited the homes of all children included in the survey. This was to ascertain the number of household contacts, to complete a form assessing pertinent socialogical information, and to explain and promote the objects of the survey. Some idea of the magnitude of this task may be gained from the fact that 1,050 effectual and 400 non-effectual visits were made.

Six hundred and sixty-nine household contacts attended at the M.M.R. for X-ray and if this investigation revealed an abnormality they were asked to consult Dr. Karlish, the Consultant Chest Physician.

An index card was made out for each child taking part in the survey and all information concerned for both child and contacts was entered upon this. These cards were subsequently sent to the Oxford Regional Hospital Board's statistical unit for final appraisal. The results of the survey have not yet been elucidated but will be included in next year's Annual Report. The numbers of those taking part are given below, while the B.C.G. figures are included in the following section.

No of children for whom consent forms were received :—

For Mantoux test only	63
For X-ray only	138
For Mantoux test, X-ray and B.C.G. vaccination	839
No. of children who attended :—	
For Mantoux test only...	56
For X-ray only	80
For Mantoux test and X-ray	780
No. of household contacts involved	2,514
No. of household contacts who were X-rayed	669

To help with the considerable clerical work, the Oxford Regional Hospital Board made available the services of a temporary clerk for four months. The Medical Officers and Statistician of the Oxford Regional Hospital Board, No. 2 Mass Miniature Radiography Unit, the Reading Chest Clinic, gave us every assistance in this enterprise and I would like to express my appreciation of their services.

(2) **B.C.G. Vaccination.** As stated in the preceding section B.C.G. vaccination was offered not only to those who were eligible for it in 1956, but also to those

taking part in the combined survey who would normally have been due for vaccination in the following year. Advancement of this procedure does not, of course, interfere in any way with its efficacy. The results for the two groups concerned are summarised below :—

B.C.G. VACCINATION

	Number Selected	Acceptances	% of Acceptances	+Absentees and repeats	B.C.G. Elsewhere	Absent	Mantoux Test	Positive	Absent for Reading	% Pos.	Received B.C.G.
1956 Group (Born 1942)	1,323	777	58·7%	51	—	29	799	126	12	16%	661
Survey Group (Born 1943)	1,449	839	58%	—	2	57	780	90	23	12%	667

(3) **Investigation of Tuberculosis Contacts.** On four occasions during the year it was necessary to investigate contacts of tuberculosis cases occurring in Reading schools. Four different schools, 2 maintained and 2 private, were involved and in each instance a single case of pulmonary tuberculosis was notified. A Mantoux test was offered to each contact and the positive cases were referred for investigation. The number of children at risk was 141 and of these 116 were Mantoux tested. Eight children had a positive result but no further confirmed cases of tuberculosis were elicited. One child was found to have a non-tubercular respiratory disease and 3 others were kept under observation at the Reading Chest Clinic.

(4) **Outbreak of Winter Vomiting Sickness.** An outbreak of winter vomiting sickness occurred in April at one of the maintained schools. The first cases were reported on the afternoon of 17th April, when 2 children from the Nursery department were taken ill, the symptoms being vomiting, rigor, and abdominal pain. During the next week 25 more cases were discovered, 2 of these being members of the teaching staff. As some of the children complained of diarrhoea, it was initially presumed that the infection was due to sonné dysentery but this diagnosis was not borne out by pathological investigation as culture of faeces in each case proved to be negative. However, although no organisms were present, each specimen contained a significant amount of precipitated fatty acids. The negative bacteriological results, the presence of large quantities of precipitated fatty acids and the general pattern of the disease, suggested a diagnosis of winter vomiting disease.

Immediate measures were taken to control the outbreak. There was no obvious defect in the arrangements for serving food and none of the kitchen staff had any suspicious symptoms. One relevant factor was that the water supply to the nursery department had been turned off on the morning of April 17th and this created obvious difficulties in hygiene. It was also discovered that in the previous term 8 children had been absent from school with a history of illness approximating very closely to that of the present outbreak. A strict hygiene regimen with appropriate disinfection was instituted early on and no further cases were reported after Thursday, 26th April.

(5) **A Typhoid Case.** A Reading schoolboy who had been on holiday on the Merseyside developed symptoms suspicious of typhoid fever some two weeks after

his return home. Investigations of his movements in Reading did not reveal any possible source from which he could have contracted the infection and as the organism concerned was later identified as VI Phage Type C_1 which is a variant of the typhoid bacillus well known in the Merseyside region, it was presumed that he had acquired the infection during his sojourn in that area.

Urgent measures were taken to ensure that the disease did not spread. At the school concerned all necessary disinfection was carried out, and those absent from school at the time of investigation and for a month afterwards were kept under surveillance. General disinfection of the home was also carried out and the agreement of adult contacts to a modified quarantine, i.e., avoidance of restaurants, canteens, and social gatherings, secured. Appropriate pathological investigations (Widal, faeces, urine) were carried out on the domestic contacts, but no evidence of infection or a carrier state was found.

As the boy had been in a general hospital prior to the final diagnosis of his condition and his removal to an infectious diseases ward, it was necessary to follow-up those hospital patients who had been in contact with him and to ensure that the T.A.B. immunisation of hospital staff was up to date. Fortunately no further cases occurred and the patient made a satisfactory recovery.

I should like to thank Dr. N. Woods (Director, Public Health Laboratory, Reading) for his co-operation in the preventive work described in the last two sections.

SCHOOL DENTAL SERVICE

Mr. J. Campbell, L.D.S., reports as follows :—

The staffing position has not improved, there being only two full-time officers.

Whitley Clinic had to be closed on 15th October, owing to the absence of the Dental Officer on Maternity leave. The closing of this clinic in two successive years, had disrupted the area served by this clinic and inflicted a further burden on the main clinic at Queen's Road. In spite of this the total number of casuals for the year shows a decrease. At the same time I would like to point out that it has thrown the whole of the work on myself, which makes it difficult to carry out as much routine inspection and treatment as one would wish. There are also a great number of parents who write or telephone regularly for appointments, thus keeping their families in good dental condition, and thereby lessening the amount of treatment necessary at each visit. This is really to be encouraged when it is so difficult to carry out regular school inspections.

Twenty-three schools were visited for routine inspection and of the total inspections (routine and casual) approximately 69% were found to require treatment, and out of this number 85% were referred for treatment and 64% accepted. A good number of those who refused treatment at the school clinic are being attended by private practitioners. The average number of attendances per child for treatment was 1·8.

There has been a marked increase in the number of patients from the Occupation Centre. In 1955, 14 attended, and in the past year 24, making 52 attendances. These handicapped patients react very favourably to treatment and make very good patients for the administration of general anaesthesia. One was supplied with a denture and on reports from the Superintendent of the Occupation Centre, I understand the patient is perfectly comfortable and has no difficulty in controlling her denture.

Regarding the staffing position, I would suggest that we make a concentrated effort to obtain Dental Officers and I reiterate my previous suggestion that the offer of housing accommodation be added to the advertisement as an inducement. This is being done by quite a number of Authorities and I consider we have no chance of receiving any applications if we do not follow their example.

The following tables provide details of the year's work :—

(1) Number of pupils inspected by the Authority's Dental Officers :		
(*a*) At Periodic Inspections	7,189	
(*b*) As Specials	1,357	
Total (1)		8,546
(2) Number found to require treatment		5,943
(3) Number offered treatment		5,052
(4) Number actually treated		3,830
(5) Attendances made by pupils for treatment		7,127
(6) Half-days devoted to : Periodic Inspection	22	
Treatment	778	
Total (6)		815
(7) Fillings : Permanent Teeth	4,453	
Temporary Teeth	544	
Total (7)		4,997
(8) Number of Teeth filled : Permanent Teeth	3,468	
Temporary Teeth	527	
Total (8)		3,995
(9) Extractions : Permanent Teeth	896	
Temporary Teeth	3,108	
Total (9)		4,004
(10) Administration of General Anaesthetics	1,053	1,053
(11) (*a*) Cases commenced during the year		50
(*b*) Cases carried forward from previous year		51
(*c*) Cases completed during the year		10
(*d*) Cases discontinued during the year		4
(*e*) Pupils treated with appliances		61
(*f*) Removable appliances fitted		54
(*g*) Fixed appliances fitted		7
(*h*) Total attendances		689
(12) Number of pupils supplied with artificial dentures		31
(13) Other Operations : Permanent Teeth	621	
Temporary Teeth	1,847	
Total (13)		2,468

The following table gives details of the treatment given to children from non-Council Schools. They attend the School Clinic as they have received scholarships from the Local Authority. The treatment is usually carried out during school vacation. Patients from the Occupation Centre are also included in this list :—

	No. Treated	No. Attendances	No. Extractions	No. Fillings	No. Anaesthetics	No. Discharged
Occupation Centre	24	52	31	2	13	19
Home Tuition ...	1	1	1	–	1	1
Wandsworth College	1	1	1	–	1	1
Blue Coat School ...	1	1	–	–	–	–
Christ's Hospital ...	3	8	4	6	1	2
St. Joseph's ...	6	20	6	2	2	4
Abbey	1	9	1	–	1	1

Two pupil's of St. Joseph's Convent were supplied with Orthodontic appliances and 1 child attending the Abbey School was fitted with a part upper denture.

The following paragraphs give a summary of the figures given in Section 11 of the first table :—

Dentures. The number of dentures supplied during the year remains much the same, varying slightly from year to year. Thirty-one dentures were fitted and repairs to existing dentures numbered 7. The supply of a denture to a child is never considered until every possible chance of saving the tooth has been tried, but too often the Dental Officer does not see the child until all hope of saving the tooth has gone. This is regrettable but unavoidable.

Orthodontics. This part of the Dental's Officer's work continues to be in great demand but only selected cases can be undertaken at present. No hardship is caused to the cases refused as, in the main, they are purely cases of appearance. The selected cases are those in which the child is suffering from severe irregularity which has an adverse effect on mastication or speech. Gross irregularity is, too frequently, accompanied by the lack of oral hygiene.

At present there are about 100 cases on hand, and we have fitted 61 appliances during the year. Repairs to existing appliances numbered 29. Ten cases were discharged having been brought to a satisfactory conclusion and 51 were carried forward from 1955.

In view of the necessary restriction of this work, I consider it quite a satisfactory output.

Oral Hygiene. The actual number of children who attended this department was 2,001. This number is made up from 1,252 children who required further dental treatment and 749 who attended for clean and polish only. The total number of attendances was 2,116.

The Hygienist visited 6 schools and gave group talks to the pupils. These talks were illustrated by the use of charts and pictures. The correct method of tooth cleaning is demonstrated by toothbrush and models of the jaws. I am assured by the head teachers, who are most co-operative, that these talks are most helpful and usually result in an influx of requests for treatment.

When the children attend the Hygienist I examine each child before and after the Hygienist cleans their teeth. In this way any child found to require further treatment is immediately re-appointed. The services of the Hygienist are of great assistance in cases of mentally handicapped children where the lack of oral cleanliness is usually present.

Details of the number of Expectant and Nursing Mothers who have attended will be found in the Maternity and Child Welfare Section of the report of the Medical Officer of Health.

Health Education. During the year a number of talks and lectures on subjects concerning the health of the school child were given to Parent-Teacher and other interested Associations.

Physical Education. During the past few years our Reports have suggested the difficulties that have arisen in establishing a satisfactory transition from the primary to the secondary stages in physical training. The difficulties have been fully understood and appreciated and, with the physical training lesson playing but a small part in the very wide field of physical education open to secondary children, there now seems less cause for anxiety. Modern ideas and new methods have been encouraged and a much more happy understanding exists between the teachers in both departments.

The appointment of specialist men teachers during the year has had a pleasing effect on boys' work and several interesting experiments are being carried out by these teachers. Unfortunately there is a great difficulty in finding specialist teachers for the girls' schools—a problem that is by no means confined to Reading but is nation wide. Until such time as new schools are opened for the girls and it is possible to offer modern facilities, there seems little chance of attracting highly qualified women teachers of physical education to Reading.

Games. There is no doubt that the greatest expansion of our work has taken place on the playing field. Our aim has been to introduce all the major games into the secondary schools in order that every child on leaving school may be more fitted to take part in healthy recreation in a game of his or her choice, and also be able to appreciate the efforts of their friends in other sports.

During the year training courses have been held for teachers to help and qualify them to coach on modern lines. These courses have included :—

(*a*) Netball—Umpiring
(*b*) Hockey—Coaching
(*c*) Cricket—Coaching for M.C.C. Certificate.

Games coaching, as opposed to games playing, demands greater supplies of suitable equipment and we are grateful to the schools where normal supplies have been supplemented from voluntary funds.

The major games played in Reading now include :—

(*a*) *Girls* Athletics, Hockey, Netball, Rowing, Tennis
(*b*) *Boys* Athletics, Basketball, Cricket, Football (Association and Rugby), Hockey, Rowing, Squash, Tennis.

It is not suggested that all schools attempt to play each of the games mentioned, but where facilities exist every attempt is made to take advantage of them.

Playing Fields. New playing fields were brought into use during the year at Geoffrey Field Primary, Caversham Park, Park Lane, Southcote and Stoneham Schools. With the exception of the area at Stoneham School, the other fields were used extensively and with care and attention should, in due course, reach the same standards as are reached on our established grounds.

At the Grove, additional land was prepared for games after the removal of dangerous trees and, within the existing boundaries, will enable three pitches to be marked where formerly there was only one. All this work was carried out by the

Committee's staff. This field now provides first-class facilities for boys but unfortunately the lack of tennis courts restricts its use greatly in respect of the girls' work.

Swimming. This subject has been given concentrated attention during the year. Teachers were encouraged to attend the A.S.A. course held in Reading and many were successful in gaining the Association's teaching certificate. There has been a marked improvement at all stages of ability. The Council's decision to grant free passes to successful candidates in life-saving examination has had a direct influence on the added interest shown in this subject. Fifty-six passes were won.

During the year, some 37,900 attendances were recorded at the baths ; a fall of 850 compared with the previous year.

Two primary schools conducted experimental lessons for beginners. They attended the baths every day for three weeks and the final results showed that similar experiments might profitably be tried by other schools.

A great deal has already been said about the learners' pool at The Hill School and little remains to be added to endorse the success of this venture. The following information about results obtained in the pool's second year are interesting. They indicate the percentage number of scholars in each class now able to swim :—

Junior IV	93%
,, IIIA	95%
,, IIIB	50%
,, IIA	65%
,, IIB	40%
,, IA	50%
,, IB	29%
Infants—3rd year	40%
Infants—1st and 2nd years ...	Children are quite confident in the water and many are already able to float.

These results show a steady improvement in ability throughout the classes and the school has every reason to be proud of the claim that out of a total of 240 junior pupils there are not more than a dozen children unable to float, and most of these can strike out for a stroke or two.

It was therefore a great disappointment to us that it was not possible to provide additional learner pools in the town. However, the pool at The Hill School created much interest and many enquiries were received from other parts of the country. These enquiries have led to other similar pools being erected and we have had the opportunity of visiting several of these and have learnt a great deal of information of value for further projects. Three schools have already started saving to pay part of the cost of learners' pools :—

Emmer Green ...	saved £130 ;	target £200
Southcote ...	saved £50 ;	target £100
Geoffrey Field ...	saved £80 ;	target £1,000

The last mentioned school's target is high in comparison with the others but it will be appreciated that in a large school a more elaborate system of filtration and chlorination will be necessary.

We look forward to receiving financial support from the Committee to carry out these schemes.

Courses. In addition to the courses already mentioned in this Report, instructional classes have been held in various areas in the town for primary school teachers. Visits were arranged for the secondary school teachers to observe work in the primary departments. Teachers were encouraged to attend vacation courses and much use was made of films and film strips to introduce new ideas and to emphasise various aspects of our work.

In conclusion, we wish to mention all those who individually have helped us in our work and to thank them together with the Committee, the Chief Education Officer, Head Teachers and their staffs and the voluntary associations for their support and co-operation during the year.

The Learner Swimming Pool—Some Observations. During the year it was considered desirable to investigate the usage of the Learner Pool at the Hill Primary School. This was carried out with the help of other departments and the following report is presented by Dr. G. M. O'Donnell, B.A., M.B., B.Ch., B.A.O., D.P.H., Deputy M.O.H. Reading, and Mr. J. E. Green, M.R.S.H., M.A.P.H.I., Chief Public Health Inspector, Reading :—

In recent years, teachers have shown a progressive interest in the practicability of small swimming pools of simple design and of comparatively modest cost, to be sited in schools which are far removed or inconvenient of access to the main swimming pool. Teachers have always agreed with doctors that swimming is both a pleasant exercise and a necessary life saving measure. They have also a more personal knowledge of the educational loss incurred by the individual child and the degree of school disorganisation consequent upon frequent swimming lessons. From this aspect it is easy to appreciate what this amenity could mean to the average primary school. Apart from the saving of valuable educational time and the not inconsiderable aesthetic pleasure to be derived from the changing faces of water, every favourable circumstance of the weather could be exploited and the vagaries of an English summer to some extent controlled. The type of pool generally envisaged is one about 18 inches draft and 45-50 feet in length and a maximum width not exceeding 15 feet. These measurements ensure that the young child of five years who finds himself in this strange and rather terrifying dimension will neither fear drowning nor too great an anabasis between the two sides.

Furthermore, all the children would be within easy sight and sound of the teacher conducting the lesson. It is apparent that pools of this nature, simple, functional, and pleasing in appearance, must, *a fortiori*, be easy and inexpensive to construct ; from the medical viewpoint cheap and effective purification of the pool water must be possible and the direct or indirect spread of disease within the pool reduced to a minimum. Unfortunately, as with so many pleasant things, it is the demands of Hygeia that are difficult to comply with, even though medical insistence on those demands be recognised as both reasonable and necessary.

Many Authorities are now contemplating the provision of learner pools in their primary school and Education Officers are pressing their medical counterparts for their support in proceeding with this matter. Reading County Borough have had such a pool in service at the Hill Primary School for the past two years, and it is hoped that our experience in its usage may be of some assistance to others who are faced with a decision as to whether their construction is advisable.

School and Learner Pool. The school in question is a mixed primary school of some 400 scholars. It is situated approximately 2 miles distant from the town centre on the North side. The pool itself is conveniently sited in a right angle formed by North and East wings of the school and is therefore sheltered from the North and East. The size of the pool is approximately 24 feet long by 12 feet wide, and it was designed to provide a depth of 1 foot 3 inches at the shallow end and 1 foot 9 inches at the deep end, although, as will be explained later, by improvisation the depth is increased from time to time for the convenience of the older children. Normal capacity is 2,700 gallons. The bath is constructed of 9 inches concrete with a paint finish. Paving laid with an outward fall extends from the bath edge for a distance of 3 feet all round the pool. A hand rail extends along the length of the bath on each side at a height slightly above normal water level. There is a 4 inch drain at the deep end for emptying, and two 1½ inch overflows are fixed at water level in the deep end also. Drainage is to main sewer.

Water Supply and Filling. The water used for the pool is from the town's mains. The bath is emptied after use on Friday and cleaned out, and is refilled ready for use on the succeeding Monday morning. The operation of filling takes a considerable time and the bath is usually not ready for use until 11 or 11.30 on Monday morning. The bathing is so arranged that older children have first use of the pool, and initially it is filled to a depth of 22 inches at the deep end. To enable this to be done, the overflows are stopped up temporarily. For the smaller children to use the bath later in the day, the water level is lowered so as to give a depth of approximately 16 inches at the deep end. At the completion of the day's bathing, the water is again topped up so as to give the original 22 inches at the deep end ready for use by the older children the following morning.

The Reading water supply is obtained partly from the River Kennet and partly from deep wells at Pangbourne. It is characteristic of many of the southern water supplies in that it has a fairly high degree of hardness, the alkalinity in terms of $CaCO_3$ ranging from 190 to 250 p.p.m. The water is not heated in any way before use. It will be seen, however, from the details shown later that a satisfactory temperature is usually achieved after a short time of exposure to the atmosphere and sunshine.

Chlorination. In the first year of its use (1955), mainly due to inclement weather, the bath was little used over a period of the four or five weeks it was available. Chlorination had been recommended and this was to be achieved by hand dosing with chloros. It was suggested that a level of 1 p.p.m. free chlorine should be maintained as far as possible. A few samples were taken in 1955 but the bacteriological results indicated a need for better chlorination control. It was therefore decided to lay down a more detailed routine for chlorination in 1956 when the pool would be available for the whole of the summer period.

For the second year's operation, it was recommended that the caretaker who had many miscellaneous duties, should not be responsible for maintaining chlorination but that the duty should be given to one of the teachers. A Log Book was introduced in which a record was to be kept of free available chlorine, p.H. value, the number of persons per session, times of bathing and the amounts of chloros added during bathing sessions. Chlorine tests were to be taken at least four times between the first and last sessions, and chlorine was to be added as necessary. It was suggested that the bathing load should be carefully controlled, allowing not more than 20 children per session and not more than 120 bathers per day.

The weekly routine was briefly as follows :—Each Monday morning, after filling the clean bath from the town's mains, the water was chlorinated before use so as to give at least 2 p.p.m. of available chlorine. Tests were to be taken throughout the day between bathing periods, and the available chlorine level raised when necessary. It was recommended that chlorine should not be allowed to fall below 1 p.p.m.

The use of the pool in 1956 began in May and early results from water sample examinations indicated that the chlorine concentration, as recommended, were not being achieved. In view of the interest in the project locally and enquiries received from elsewhere, it was decided to look further into the matter.

Detailed Investigation. This involved frequent chemical and bacteriological examinations over a period of five days and was carried out in close co-operation with Mr. J. Priest, Bacteriologist to the Reading Water Department. The main object of the investigation was to enquire into the apparent difficulty of maintaining a sufficiently high level of free chlorine and to see if it were possible to formulate a method of hand dosing capable of giving a reasonable margin of safety and without interference unduly with the swimming routine of the school. The idea of the learner pool is to give frequent opportunity to scholars to become accustomed to water and for learning to swim. Time in the bath is short—approximately 10 minutes, and normally as one class is about to leave the pool the next is ready to go in. The operation of checking and chlorination, therefore, has to be done quickly if the pool is to be put to maximum use. All children have had instructions as to general behaviour and are required to visit toilets before entering the pool. There are no showers for use prior to entering and no fixed foot bath although the children were required to step into a galvanised iron tray approximately 3 feet by 2 feet and 4 inches in depth, containing super-chlorinated water, before entering the pool itself. The bathing load was again fixed at not more than 20 per session, although it will be noted from Chart A that on three occasions this figure was exceeded.

The water conditions were checked by :—

1—Chemical analysis which included examination for colour, odour, chlorides, turbidity, pH value, ammoniacal nitrogen, albuminoid nitrogen, nitrites and nitrates, oxygen absorbed in four hours at 27° C. and residual chlorine.

2—pH test by colorometer.

3—Free chlorine—ortho-tolidine test.

4—Temperature.

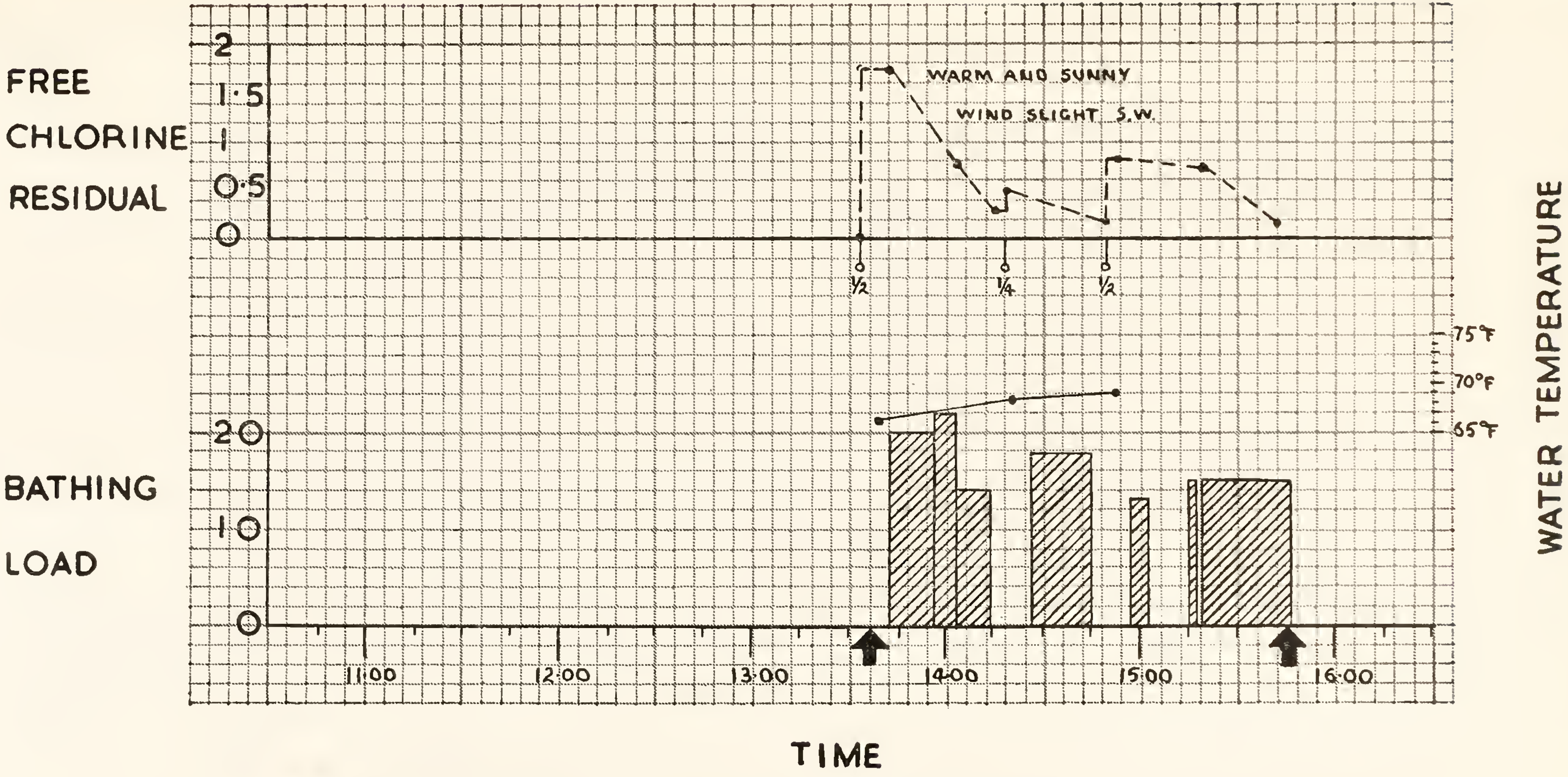
5—Bacteriological examination.

In addition, notes were made of atmospheric conditions during the period of use of the pool, i.e., sunshine, cloud cover, wind speeds, etc. The degree of atmospheric pollution present in the area of the school was also investigated but the results were of no significance.

With regard to the chemical analysis of the water, it is worth noting that the only alkalinity test was by pH readings, the variable bicarbonate content not being calculated for each sample, partly to reduce the work involved, and partly as it was felt that because of the particularly high $CaCO_3$ content of the Reading water, the use of the chloros method of chlorination, the weekly water change, and the daily lowering and raising of water level, the alkalinity would not be unduly affected, To some extent, the latter supposition is supported by pH readings, but since the chlorination routine introduced was in the nature of break-point chlorination, it would seem better, on reflection, if the $CaCO_3$ factor had been checked.

Dosing and Loading of Pool. The method of dosing with chlorine was by taking the amount of chloros estimated to be required, placing it in a bucket which was then filled up with water, the mixture being distributed around the pool at approximately yard intervals. The pool was then agitated by vigorous strokes across the bath with a clean paddle. It was quickly realised that the interval between sessions was much too short to permit further topping-up with chloros if the initial dosage on each occasion was not enough, but to attempt to reach a precise level, especially in view of what appears to be a most important variable factor so far as free chlorine is concerned—sunshine and water agitation by breeze and the movement of children in the pool—would have necessitated a wide departure from bathing routine. Indeed, it was not reasonably practicable to repeatedly obtain a constant initial level except at the beginning of the day. The bathing load adjusted to a ten-minutes-per-child equivalent is shown graphically on pages 41-45 together with notes as to atmospheric conditions, temperatures, and times of chemical and bacteriological sampling.

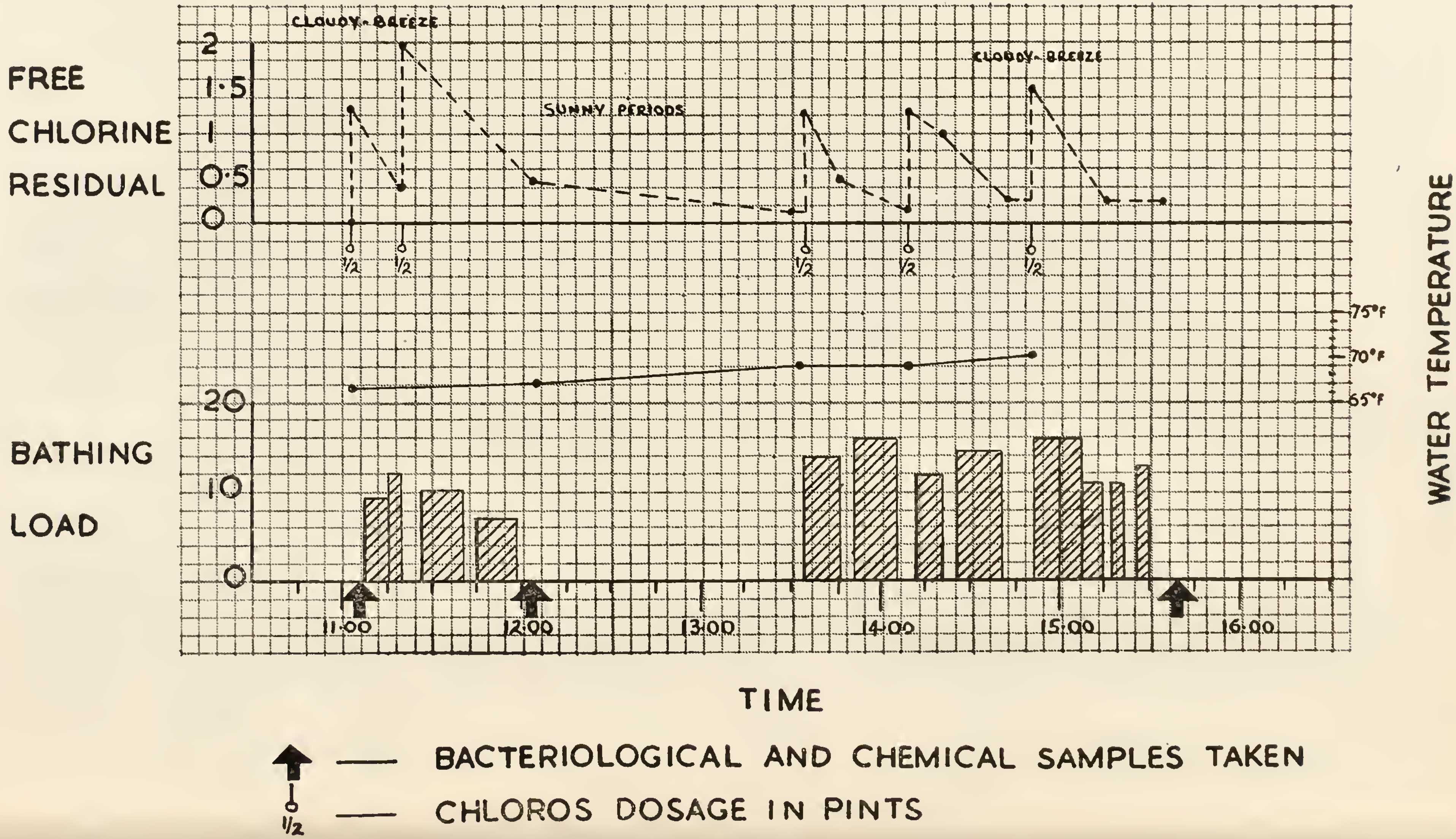
MONDAY 23RD JULY 1956



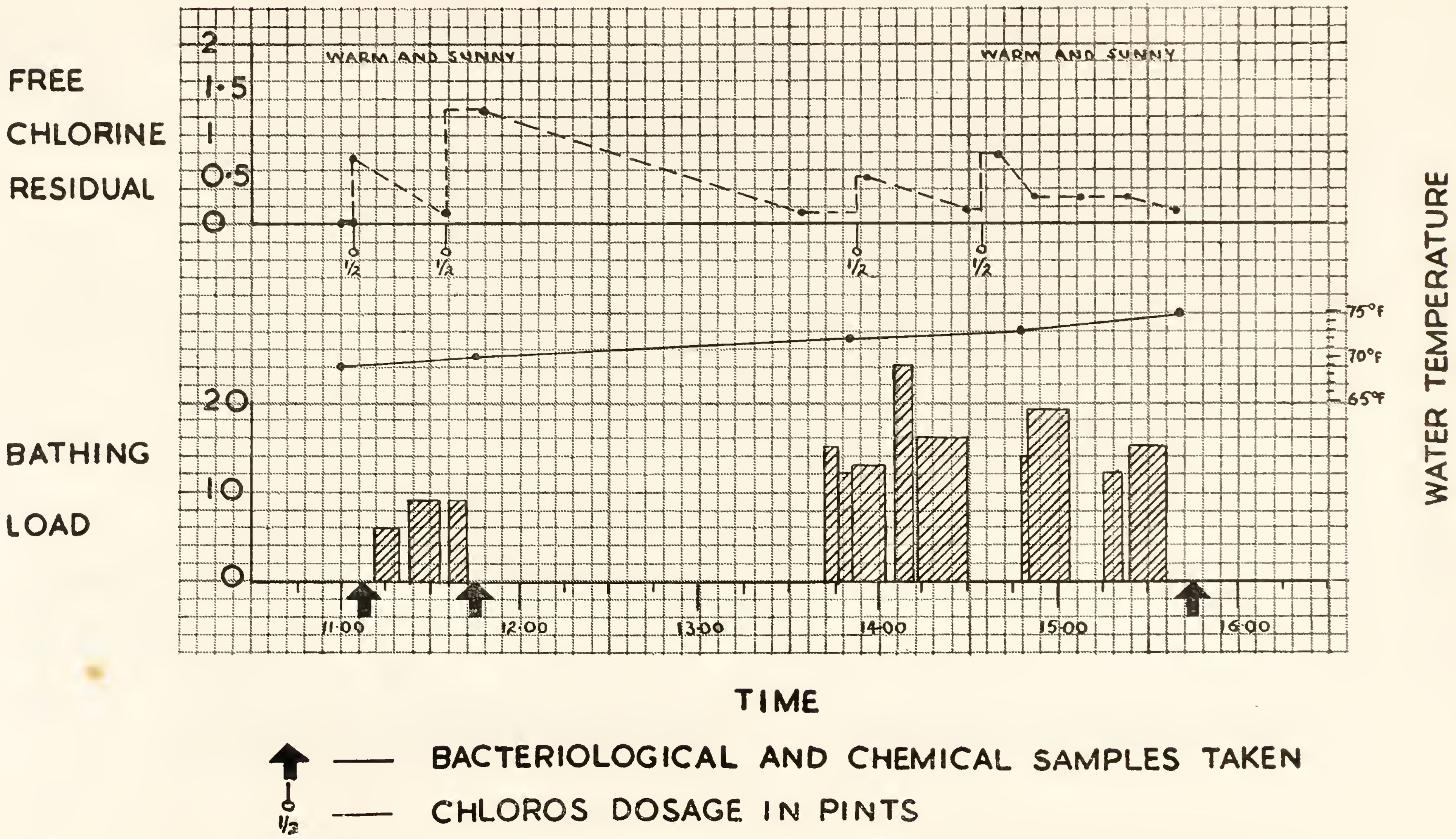
⬆ — BACTERIOLOGICAL AND CHEMICAL SAMPLES TAKEN

½ — CHLOROS DOSAGE IN PINTS

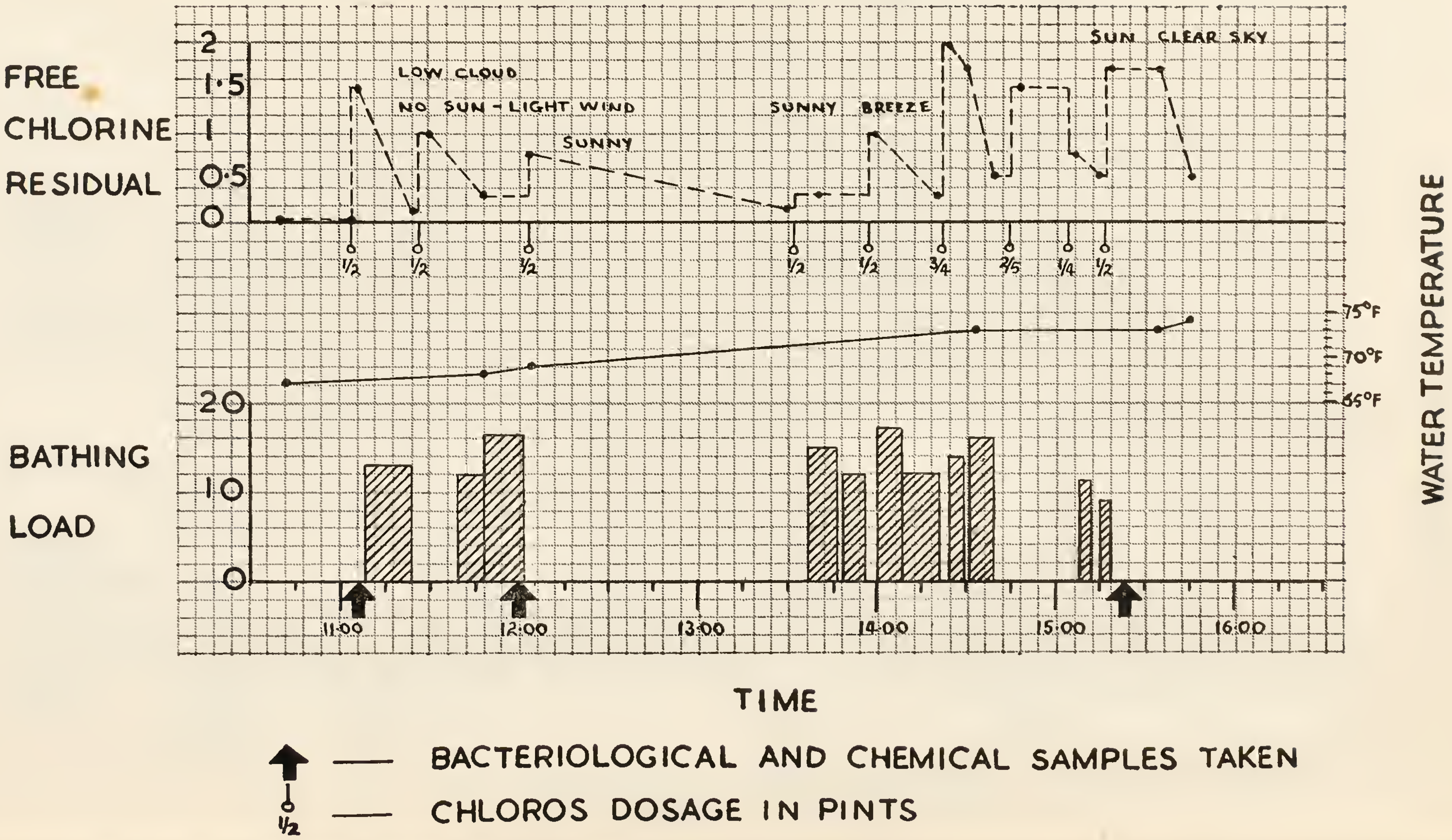
TUESDAY 24TH JULY 1956



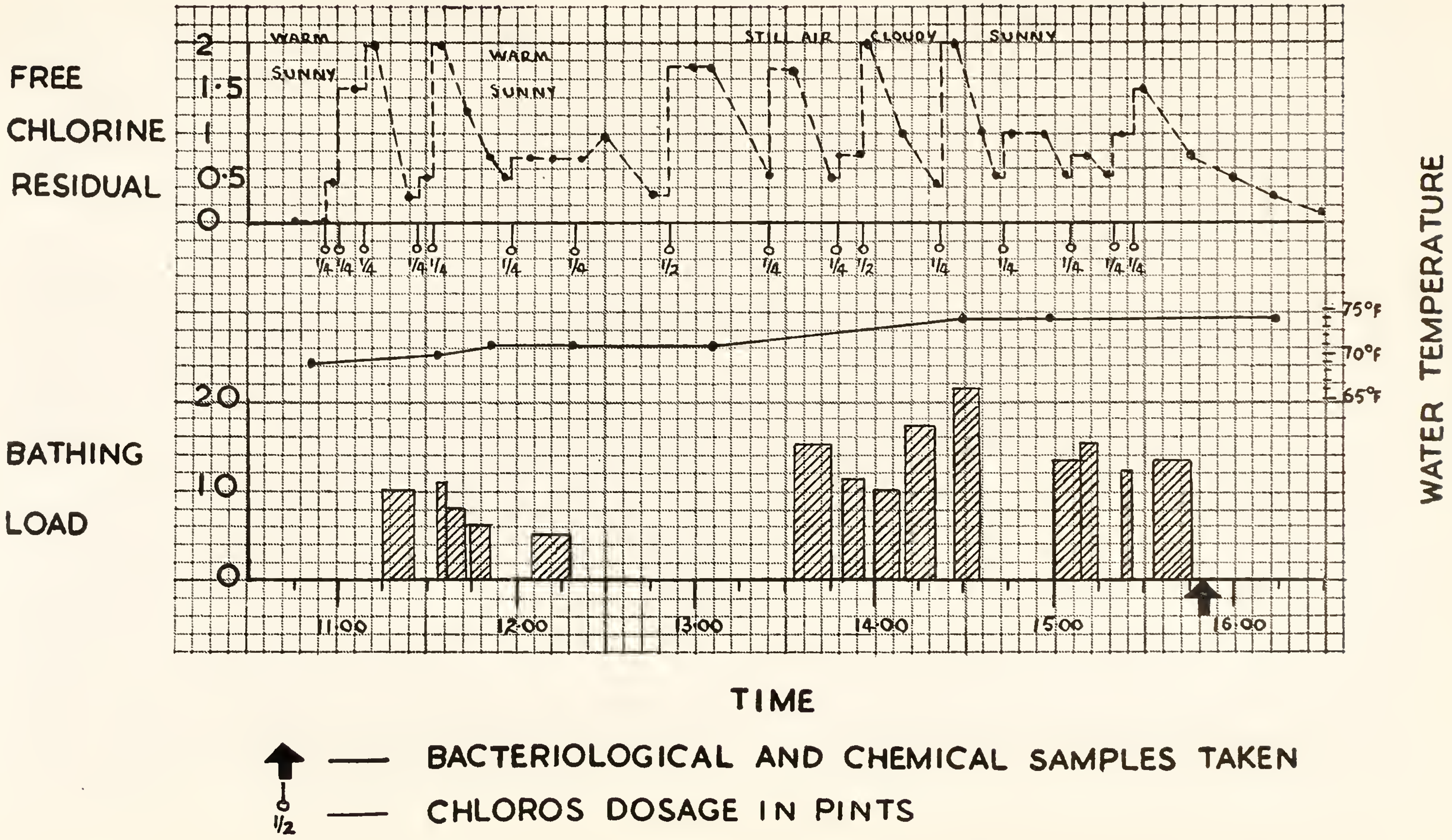
WEDNESDAY 25TH JULY 1956



THURSDAY 26TH JULY 1956



FRIDAY 27TH JULY 1956



Observations. *Chlorination.*—The limitations of marginal chlorination and reliance on the action of chloramine are not discussed since it is felt that free chlorine was the principal active agent and that it was on this factor alone that reliance could be placed in the circumstances of this pool use.

It is now generally accepted that provided the pH value of swimming water can be kept to a level of between 7·5-8·0, and alkalinity in terms of $CaCO_3$ to 200 p.p.m., free chlorine to a level of 2 p.p.m. and over will not be offensive to bathers. This will especially apply to open-air bathing. Experience suggests, however, that the dissipation rate of free chlorine in the circumstances of open-air bathing, is of such a degree as to make it virtually impossible to achieve a constant figure of 2 p.p.m. free chlorine by hand dosing, and indeed the cost of chlorine and labour in attempting to maintain it might be prohibitive. The dosing on Friday, 27th July, illustrates this point well. From just before 11 a.m. until 3.30 p.m. the pool was dosed 16 times, and in only four instances was a level of 2 p.p.m. obtained. The two members of the staff engaged in the investigation, were hard put to dose the pool so frequently and this rate could not be expected for ordinary use.

Bacteriological Results.—Some 12 samples were examined bacteriologically, and of these, only 2 could be considered unsatisfactory. Details are shown in the tables. In both these instances, the samples were taken towards the end of the day, one on Tuesday, 24th July, and the other on Wednesday, 25th July. With regard to Tuesday, the time of last dosing was at approximately 2.50 p.m., 50 minutes before the sample was taken, whilst that on Wednesday was taken at approximately one hour after the last chlorine dosage. On both these days dosing was deliberately discontinued early in the afternoon to see what the results would be.

Chemical Results.—Samples for chemical examination were taken at the same time as those for bacteriological examination. The results are quite interesting from the point of view of oxygen absorbed chlorides and turbidity. The O_2 absorbed figure for the four samples indicates that the bath was not adequately cleaned to start with but it was not unduly high at the end of the week. The chlorides figures, as expected, were related to the addition of chlorine.

Consideration of the foregoing points has prompted us to suggest the following routine as one which should give satisfactory results.

Suggested Routine. It will be realised, of course, that various factors are involved in break-point chlorination and unless various conditions are satisfied, it is not likely that the break-point chlorination method can be achieved. One of the main considerations is the water supply which should be of a suitable pH value and have a satisfactory $CaCO_3$ content. If these conditions can be satisfied there does not appear to be any reason why a satisfactory chlorination routine cannot be maintained. If the water has a $CaCO_3$ alkalinity of approximately 200 p.p.m. and the pH value is between 7·6 and 8·0, the addition of chlorine in the form of chloros will probably be sufficient to maintain break-point conditions. If the water is not suitable as regards alkalinity or pH value, an addition of alkalies would be involved and this might well rule out the practicability of treatment in this way.

General conditions being satisfactory, the following routine should give reasonable results and safeguards :—

1—Thorough cleansing between emptying and refilling.

2—Bath dosed initially each day, sufficient to give at least 2 p.p.m. free chlorine.

3—Re-dose to at least 2 p.p.m. immediately prior to afternoon session and again mid-way through afternoon.

4—Check chlorine and pH values at least once between chlorine dosages.

5—Arrange bath loading so as to give an even flow of bathers through the bath, giving approximately 20 per session—140 per day.

6—Instructions should be given to bathers as to personal behaviour. All children should visit the toilet before entering the bath.

7—Foot bath containing super-chlorinated water to be used by all bathers before entering the pool.

8—Arrange for bacteriological checks during week and until a satisfactory routine is established.

9—It is advisable, where possible, to change the water completely and clean the bath mid-week, or, as an alternative, super-chlorinate and allow the bath to stand for a day without use.

10—Adequate records should be kept.

11—In the event of an outbreak of polio or other exceptional circumstances consideration should be given to the closure of the pool owing to the propinquity of the children using it.

Conclusion. As to how far hand dosing with liquid hypochlorite is a worthwhile enabling factor to more widespread bathing facilities at schools and as to what precise limitation this method has from a public health point of view are matters worthy of further investigation. But it does seem from the investigations made that to insist in all cases on continuous filtration and chlorination might well deny to many children the benefits which can be derived from this activity. Whilst no one would question that hand dosing does not ensure absolute control in the critical eyes of some perfectionists, its usage must also be related to the legitimate demands of an Education Authority anxious to ensure extra bathing facilities for its children. To reconcile these opposing viewpoints is largely a matter for discussion and decision among the officials involved and the purpose of this paper is to bring before them the relevant data obtained by an Authority which has already come into contact with this problem.

Our own considered opinion is that hand dosing is a practical proposition and although initially it may present many difficulties, with reasonable co-operation between education and public health staffs a safe procedure can be evolved. It is apparent that the instalment of learner pools is receiving widespread consideration throughout the country and that regarded from the aspects of enjoyment and life saving it is indeed a desirable proposition. No Public Health Department would like to put a halt to the onward march of progress and it would appear to us that every consideration should be given to such schemes and that the problems raised should not be deemed insurmountable.

The thanks of the authors are due to Mr. O. Kean, Water Engineer, Reading; Mr. J. Priest, Bacteriologist of that Department; to Mr. P. S. Taylor, Chief Education Officer, and Miss E. Alderson, Headmistress of the Hill Primary School, for the assistance they have generously given.

SPECIAL CLINICS

(*A*) **Remedial Exercises.** Two hundred and twenty-four children were advised to do remedial exercises for skeletal defects during the year. The number of children in each category is listed below :—

Flat Feet	125
Round Shoulders	77
Both Flat Feet and Round Shoulders	22

A further 203 who had poor chest expansion, breathing defects, or asthma, were recommended breathing exercises. The breathing exercises advised were deliberately chosen for their simplicity, for to younger children they can be presented as an amusement rather than a penance. As a means of re-educating children in the correct usage of respiratory muscles and passages and in the development of the lung potential, these exercises are of the foremost assistance and act as a positive reinforcement of bodily health.

Illustrated leaflets demonstrating the exercises appropriate to the defect were given to each child in the above categories. Ninety-six children attended the gymnasium at the School Clinic, Queen's Road, for the remedial exercise class, which is held every Tuesday afternoon.

(*B*) **Ringworm of the Scalp.** Ten new cases of Ringworm of the Scalp were diagnosed in 1956 compared with an incidence of 11 new cases in the previous year. A domestic animal was believed to be the source of infection in each instance.

RINGWORM OF THE SCALP

	Total	School Age	Pre-School Age	Boys	Girls
Number of Cases treated	10	8	2	5	3
No. of Cases referred to Royal Berks Hospital	3	2	1	1	1
No. given X-ray Treatment	—	—	—	—	—
No. of Contacts examined	9	9	—	7	2

Average absence from school was 20 days

(*C*) **Ultra Violet Light Therapy.** This was available during the year at the Queen's Road Clinic, Whitley Clinic, and the Avenue School. Sunlight treatment is always very popular with the children and since it is rarely that good fun and good advice coincide, they derive maximum benefit from these sessions.

34 boys }
47 girls } received an average of 46 minutes each.
10 pre-school children }
525 separate attendances were made.
Children treated were mostly in 5-8 years group.

ROAD ACCIDENTS

We are indebted to Inspector Attrill for the following information :—

I attach a schedule of injury accidents involving children of school age only which have occurred in the Borough during 1956.

A usual there is a preponderance of boys over girls, but the wide disproportion is most marked in the pedal cyclist group where it will be seen boys out-number girls as much as four to one.

A feature of cycling accidents which is disturbing is the frequency of the type usually involving boys paying insufficient attention to the road ahead and colliding with a stationary vehicle or obstacle. In December, 5 children, all boys, were injured and no less than 4 were involved in accidents of this kind.

An examination of accident proneness tends to show that boys on the whole act with less responsibility and care than girls. Girls, on the other hand, often become involved as a result of loss of composure when in difficult and complicated traffic situations, which only proper training and experience can overcome. Turning right without proper positioning and adequate warning, is a frequent cause of accidents affecting all age groups and all classes of road user.

There is no doubt that present day traffic conditions demand that child cyclists should receive some form of expert instruction before they are allowed to ride on the highway unaccompanied by an adult.

ACCIDENTS INVOLVING CHILDREN OF SCHOOL AGE, 1956

	Pedestrians		Pedal Cyclists		Passengers		Total
	Male	Female	Male	Female	Male	Female	
January...	–	–	3	1	–	–	4
February	5	1	–	1	–	–	7
March ...	3	2	3	–	–	1	9
April ...	2	2	3	1	–	–	8
May ...	2	3	7	1	–	–	13
June ...	4	4	3	4	–	–	15
July ...	4	1	3	–	–	1	9
August ...	1	1	6	–	–	1	9
September	2	2	4	–	–	–	8
October	3	2	1	1	–	–	7
November	3	2	–	–	–	–	5
December	1	–	4	–	–	–	5
	30	20	37	9	–	3	99

STATISTICAL DATA

TABLE I

(*A*) Periodic Medical Inspections

Age Groups inspected and Numbers of Pupils examined in each :—

Entrants	1,734
Second Age Group	1,750
Third Age Group	1,249
Total ...	4,733
Additional periodic inspections	391
Grand Total	5,124

(*B*) Other Inspections

Number of Special Inspections	1,386
Number of Re-inspections	3,318
	4,704

(*C*) Pupil Found to require Treatment

Group	Defective vision excluding squint	For any other condition	Total individual pupils
Entrants	84	290	337
Second Age Group	113	158	317
Third Age Group	115	86	168
Total	312	534	822
Other Periodic Inspections ...	5	18	22
Grand Total ...	317	552	844

(*D*) Classification of the Physical Condition of pupils inspected in the Age Groups recorded in Table I (*A*)

Age Groups Inspected	Number of Pupils Inspected	Satisfactory		Unsatisfactory	
		No.	% of Col. (2)	No.	% of Col. (2)
Entrants	1,734	1,728	99·6	6	·3
Second Age Group ...	1,750	1,745	99·7	6	·3
Third Age Group ...	1,249	1,239	99·2	10	·8
Add. Periodic Inspections ...	391	389	99·5	2	·5
Total ...	5,124	5,101	99·5	23	·4

TABLE II

Infestation with Vermin

(i)	Total number of individual examinations of pupils in schools by the school nurses or other authorised persons	41,756
(ii)	Total number of individual pupils found to be infested	457
(iii)	Number of individual pupils in respect of whom cleansing notices were issued (Section 54 (2)) Education Act, 1944	17
(iv)	Number of individual pupils in respect of whom cleansing Orders were issued (Section 54 (3)) Education Act, 1944	1

Medical Inspection Returns

TABLE III

(*A*) Periodic Inspections

Defect or Disease	Periodic Inspections				Total	
	Entrants		Leavers		(Including all other age groups inspected)	
	Requiring treatment	Requiring observation	Requiring treatment	Requiring observation	Requiring treatment	Requiring observation
Skin	12	28	13	13	45	52
Eyes—						
Vision ...	48	46	113	54	317	239
Squint ...	35	9	2	4	63	27
Other ...	5	6	1	10	11	25
Ears—						
Hearing ...	3	30	1	3	10	54
Otitis Media	13	36	6	3	28	62
Other ...	6	6	2	3	14	20
Nose and Throat	92	130	17	18	145	211
Speech	16	37	1	–	32	45
Lymphatic Glands	6	39	–	4	6	74
Heart	2	6	1	5	5	22
Lungs	15	42	3	12	25	83
Development—						
Hernia ...	1	6	1	2	3	13
Other ...	5	28	9	16	26	72
Orthopaedic—						
Posture ...	3	5	5	6	29	27
Feet	16	19	5	6	51	49
Other ...	21	54	21	19	64	134
Nervous System—						
Epilepsy ...	3	4	1	1	6	7
Other ...	2	23	1	6	11	53
Psychological—						
Development	1	11	–	–	5	23
Stability ...	–	30	–	7	5	57
Abdomen ...	–	3	–	–	–	3
Other	5	21	2	4	13	37

Medical Inspection Returns

TABLE III (*Continued*)

(*B*) Special Inspections

Defect or Disease	Special Inspections	
	Requiring Treatment	Requiring Observation
Skin	289	16
Eyes—		
Vision	84	116
Squint	15	24
Other	77	31
Ears—		
Hearing	15	32
Otitis Media ...	17	19
Other	39	11
Nose and Throat ...	95	110
Speech	27	23
Lymphatic Glands ...	9	18
Heart	9	16
Lungs	26	59
Development—		
Hernia	2	1
Other	12	63
Orthopaedic—		
Posture	7	18
Feet	10	9
Other	36	62
Nervous System—		
Epilepsy	8	4
Other	4	49
Psychological—		
Development ...	15	28
Stability	4	11
Abdomen	–	1
Other	1,166	40

Medical Inspection Returns

TABLE IV

Group 1—Eye Diseases, Defective Vision and Squint

	Number of cases known to have been dealt with	
	By the Authority	Otherwise
External and other, excluding errors of refraction and squint	131	128
Errors of refraction (including squint)	—	550
Total	131	678
Number of pupils for whom spectacles were prescribed ...	—	443

Group 2—Diseases and Defects of Ear, Nose and Throat

	Number of cases known to have been treated	
	By the Authority	Otherwise
Received operative treatment—		
(*a*) For diseases of the ear	—	—
(*b*) For adenoids and chronic tonsillitis	—	206
(*c*) For other nose and throat conditions	—	3
Received other forms of treatment	102	28
Total	102	237
Total number of pupils in schools who are known to have been provided with hearing aids—		
(*a*) In 1956	5	3
(*b*) In previous years	9	23

Group 3—Orthopaedic and Postural Defects

	By the Authority	Otherwise
Number of pupils known to have been treated at clinics or out-patient departments	96	—

Group 4—Diseases of the Skin (excluding uncleanliness for which see Table II)

		Number of cases treated or under treatment during the year by the Authority
Ringworm— (i)	Scalp	10
(ii)	Body	6
Scabies		3
Impetigo		57
Other Skin Diseases		367
	Total ...	443

Group 5—Child Guidance Treatment

Number of pupils treated at Child Guidance Clinics under arrangements made by the Authority	33

Group 6—Speech Therapy

Number of pupils treated by Speech Therapists under arrangements made by the Authority	206

Group 7—Other Treatment Given

(*a*)	Number of cases of miscellaneous minor ailments treated by the Authority	1,698
(*b*)	Pupils who received convalescent treatment under School Health Service arrangements	3
(*c*)	Pupils who received B.C.G. vaccination	1,328
(*d*)	Other than (*a*), (*b*) and (*c*) above (specify) U.V. Therapy	81
	Total (*a*) to (*d*)	3,110

Cases of Infectious Disease in School and Pre-School Children for the year 1956

	At All Ages	Under 1 year	1 and under 3 years	3 and under 5 years	5 and under 10 years	10 and under 14 years
Scarlet Fever	48	–	2	7	32	7
Whooping Cough	206	13	75	47	64	7
Measles	122	6	37	13	59	7
Acute Pneumonia (Primary or Influenzal) ...	13	1	4	2	5	1
Cerebro Spinal Fever	–	–	–	–	–	–
Acute Poliomyelitis (Paralytic)	2	–	–	–	1	1
Acute Poliomyelitis (Non-Paralytic)	1	–	–	–	1	–
Diphtheria	–	–	–	–	–	–
Enteric or Typhoid Fever (excluding Paratyphoid) ...	1	–	–	–	1	–
Food Poisoning	1	–	–	–	–	1
Erysipelas	1	–	–	1	–	–
Dysentery	75	4	17	8	33	13
Meningococcal Infection	1	–	1	–	–	–
	471	24	136	78	196	37

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